TITLE 327 WATER POLLUTION CONTROL BOARD

LSA Document #08-764

SUMMARY/RESPONSE TO COMMENTS FROM THE SECOND COMMENT PERIOD

The Indiana Department of Environmental Management (IDEM) requested public comment from December 16, 2009, through January 30, 2010, regarding development of new rules and amendments to rules concerning antidegradation standards and implementation procedures. IDEM received comment letters from the following parties by the comment period deadline:

Alcoa Warrick Operations, Denny Wene, Senior Staff Environmental Engineer (AWO)
Barnes & Thornburg, Fredric P. Andes (BT)
Chambers, Claire S., citizen of Murrieta, California (former Indiana resident) (CSC)
Davies, Margaret, citizen of Dana Point, California (MD)
Daya, Christopher, citizen of Chicago, Illinois (CD)
Environmental Coalition, Jeff Hyman, including the Alliance for the Great Lakes, Conservation Law Center, Environmental Law and Policy Center, Hoosier Environmental Council, Natural Resources Defense Council, and Sierra Club Hoosier Chapter (EC) (The EC comment letter includes two attachments as part of the comment letter and included in this summary of comment letters. Attachment A is the EC's edited version of the antidegradation draft rule. Attachment B is answers to IDEM posed questions to the antidegradation subgroup in October 2008.)
Finder-Stone, Patricia, League of Women Voters of Greater Green Bay, DePere, Wisconsin (PFS)
Frost, Abigail, founder of Save Maumee Grassroots Organization, Fort Wayne, Indiana (AF)
Ilg, Carissa, citizen of Chicago, Illinois (CI)
Indiana Coal Council, Nat Noland (ICC)
Indiana Farm Bureau and **Indiana Pork Producers Association** (IPP, IFB)
Indiana Energy Association, Stan Pinegar, representing a trade association whose membership includes 13 investor-owned electric and gas utilities and one charitable public trust gas utility, all operating in the state of Indiana. Collectively, the IEA members and individual non-members are referred to in these comments as the Indiana Utility Group (IUG) (The IUG comment letter incorporated by reference the written comments prepared by Bill Beranek, Indiana Environmental Institute, Inc., a copy of which is included in this summary of comment letters.)
Indiana Steel Environmental Group, Patrick M. Gorman, representing a coalition of Indiana steel companies, including ArcelorMittal USA, Inc., ArcelorMitttal Indiana Harbor, LLC, United States Steel Gary Works, United States Steel Midwest Plant, ArcelorMittal Burns Harbor LLC, and Nucor Steel Crawfordsville. (ISEG)
Indiana Water Quality Coalition and the Indiana Manufacturers Association, William C. Wagner. IWQC is a group of businesses with shared interests in Indiana regulations, policies, and operating procedures concerning water quality. IMA is a voluntary, nonprofit trade association representing nearly 2,000 companies and 600,000 manufacturing jobs. (IWQC-IMA)

Jonson, Suzanne, citizen of San Francisco, California (SJ)
Kelso, David and Kerry, citizens of Sierra Vista, Arizona (DKK)
Landry, Robert W., citizen of Egg Harbor, Wisconsin (RWL)
Lannin, Susan D., citizen of Chicago, Illinois (SDL)
Ledgerwood, Lynn, citizen of Olympia, Washington, supporter of the Alliance for the Great Lakes (LL)
MED, citizen of Chicago, Illinois, supporter of the Alliance for the Great Lakes (MED)
Montapert, Anthony, citizen (AM)
Northern Indiana Public Service Company, Dan Plath, with four active electric generating stations, two sited on Lake Michigan, one on the Kankakee River, and one located off of the Wabash River near Terre Haute (NIPSCO)
Northwest Indiana Forum, Kay Nelson, representing industrial and commercial businesses, financial entities, universities and municipalities within Lake, Porter, LaPorte, and Starke counties (NIF)
Pawlik, Laura A., citizen of Chicago, Illinois (LAP)
Palleon, Marjorie, citizen of Cedarburg, Wisconsin, (MP)
Petering, Louise, President of League of Women Voters of Milwaukee County, Milwaukee, Wisconsin (LP)
Sannito, Julie, citizen of Munster, Indiana (JS)
Shillinglaw, Craig, citizen of Valparaiso, Indiana (CS)
Southerland, Ada, citizen (AS)
U.S. Environmental Protection Agency, Region 5, Water Quality Branch, Linda Holst (USEPA)
Valley Watch, Inc., John Blair, President (VWI)

Following is a summary of the comments received and IDEM's responses thereto:

INTRODUCTION

The Federal Clean Water Act requires states to develop rules to:

- Protect existing uses of waters;
- Maintain existing water quality;
- Provide a mechanism to include a public input process for evaluating any proposed deterioration of water quality from discharges.

This draft antidegradation rule is IDEM's proposed process for determining when a proposed deterioration is necessary and provides a social and economic benefit. The current antidegradation rule only applies to the Great Lakes basin.The proposed Draft Rule expands the antidegradation procedures to apply to all waters across the entire state; and:

- Increases public opportunities for information and input;
- Protects current "fishable/swimmable" and other existing uses of waters;
- Allows for the issuance of legal permits for discharges to water; and,
- Does not allow the violation of water quality standards.

COMMENT PERIOD EXTENSION REQUEST

Comment: The draft rule was issued just prior to the holidays, a time when Alcoa-

Warrick Operations typically slows down. There have been minor changes to the draft rule that seem significant; therefore, an additional 30 days should be added to lengthen the comment period to ensure that the correct data and comments can be submitted to IDEM so it has an opportunity to receive and evaluate all the information necessary for this rule. (AWO)

Response: This comment period extension request and a similar one received from Indiana Manufacturer's Association through e-mail (not an official mode of comment submission, therefore, not included in this comment summary) were not approved by IDEM because the draft rule in the second notice, posted December 16, 2009, in the Indiana Register, is unchanged (except for correcting one typographical error) from the draft rule provided to stakeholders, including both extension requesters, at the August 4, 2009, stakeholders meeting. The 45 day comment period is 15 days longer than the 30 day comment period required under IC 13-14-9-2. IDEM allowed the extra 15 days to compensate for the holidays.

CITIZENS

Comment: Indiana's current antidegradation requirements were developed under the Great Lakes Initiative of the 1990s and apply only to the Lake Michigan basin. The Clean Water Act (CWA) requires states to update their water quality standards at least every three years and to develop and adopt statewide antidegradation policies for water quality standards. Indiana's rules have not been updated since the 1990s but now are being debated against the backdrop of the public outcry that followed the state's issuance of a wastewater permit in 2007 that would have allowed British Petroleum's Whiting, Indiana refinery to increase its pollution discharge to Lake Michigan. The BP permit drew concern that Indiana's law doesn't do enough to protect water quality, and an independent review found the state's inconsistent antidegredation policies caused some of the confusion. This current rulemaking effort must produce an antidegradation rule that is strong in protection and applies to all Indiana waters, including the currently troubled Maumee River that is the largest and longest contributing stream to the Great Lakes. (AF)

Response: The draft rule language is applicable to all waters of the State.

Comment: Lake Michigan deserves the highest level of protection from new or increased pollution. Indiana's antidegradation rule must be strengthened to protect water quality as the CWA intended. The Alliance for the Great Lakes is working with a coalition of groups in Indiana to strengthen the federally mandated rule, which sets a limit for how much new pollution can be discharged to Lake Michigan and other waterways in the state. (CSC, MD, CD, MED, AF, CI, DKK, SDL, LL, AM, LAP, AS, JS)

Response: Should the federal rules be amended and Indiana required to comply with those revised rules, the Water Pollution Control Board and IDEM will respond appropriately.

. ***Comment:*** The draft antidegradation rule is of concern because it appears to contradict the intent of the laws meant to protect water quality while working to comply with existing standards. The rule needs to be strengthened rather than allow exemptions for new pollutants that can be discharged into Lake Michigan. The effect on the health of the population is of great concern. (PFS, SJ, MP)

Response: Regardless of whether activities/pollutants are exempted from an antidegradation review, water quality must always be maintained to protect existing uses. These uses include protecting human health from negative effects that may result from the consumption of aquatic organisms or drinking water from a particular waterbody. The draft rule is intended to enact the federal and state statutory frameworks which IDEM is required to apply through the rule.

Comment: Indiana's antidegradation rule, rather than protecting water quality while working to comply with existing standards, would trigger an antidegradation review only when a new or increased discharge would increase the level of a pollutant to the degree it poses a potentially "detrimental effect" on lake uses. (MD, CD, MED, AF, CI, SDL, LL, LAP, AS, CS)

Response: IDEM agrees that the definition for pollutant of concern resulted in unintended consequences and confusion. Therefore, in the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant" and the definition for regulated pollutant clarifies when an antidegradation review is triggered.

Comment: The rule includes several unjustified exemptions and excludes phosphorus, sediment, and other key pollutants for which no thresholds exist from protective provisions, even though these pollutants are known to harm water quality.(MD, CD, MED, AF, CI, RWL, SDL, LL, LAP, LP, AS, JS)

Response: The rule does not exclude these substances. In the revised draft rule, the term pollutant of concern has been replaced with regulated pollutant. The definition of a regulated pollutant includes phosphorus. Sediment is not a regulated pollutant, but total suspended solids is a regulated pollutant. The rule has been revised to address the concerns about the exemptions by requiring some level of an antidegradation demonstration for all activities that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit.

Comment: The rule exempts so-called "de minimis", or low level, new pollution discharges from a federal requirement that the pollution is a necessary byproduct of important local economic or social benefit. The result is that state regulators, using the methods proposed in the draft rule, could permit multiple, new, low-level discharges of a pollutant that together have a significant cumulative impact on Lake Michigan's water quality without any evidence that the additional pollution is justified. (MD, CD, MED, AF, CI, SDL, LL, LAP, LP, AS, CS)

Response: The revised draft rule establishes a benchmark available loading capacity equal to 90% of the available loading capacity at the time of the first request to lower water quality in a high quality water, including Lake Michigan. The rule proposes that this benchmark loading capacity be established to limit the number of discharges that can be permitted without an antidegradation demonstration.

Comment: The antidegradation rule must disallow discharges of new pollutants, including nano-particles. (LP)

Response: "Nano-particles" is a generic term for matter that is very small. There are no water quality or technology based standards for nano-particles because it is so generic. Therefore, there is no mechanism for establishing NPDES permit effluent limitations or evaluating antidegradation for nano-particles.

U.S. ENVIRONMENTAL PROTECTION AGENCY

Comment: U.S. EPA staff participated in the antidegradation rulemaking stakeholder meetings throughout 2008 and 2009, submitted informal comments, and held conference calls with IDEM to discuss EPA's concerns with the rule. EPA is pleased to see that the following items were included in the December 16, 2009, draft rule: (1) Tier I antidegradation review to protect existing uses and prohibit a lowering of water quality where impairment exists; (2) an

attempt to address how antidegradation should be handled in general permits; (3) an expanded social and economic section including more options for determining social and economic importance; and (4) an attempt to eliminate two separate antidegradation rules, one for the Great Lakes basin and one for other waters, and compile the requirements under one rule. However, EPA's review reveals the draft rule has several components that appear to be inconsistent with applicable federal requirement and could result in EPA's disapproval if they are not revised or clarification is not provided to explain how the language is consistent with federal requirements. (USEPA)

Response: The draft rule was revised to address USEPA's concerns. IDEM anticipates working closely with US EPA, and other stakeholders, in ensuring that the final rule incorporates all required components.

Comment: "Pollutant of concern" is defined as a pollutant that is reasonably expected to be present in a new or increased discharge, and in the receiving water in sufficient amounts to have a potentially detrimental effect on the designated or existing uses of the receiving water. In previous responses to comments, IDEM indicated that it would consider a pollutant to be present in sufficient amounts to have a detrimental effect on designated uses if the pollutant were present in concentrations at or near those triggering permit limits. This is inconsistent with the federal requirement to maintain and protect high quality waters and, given IDEM's previous statements, to be inconsistent with EPA's guidance on significance or de minimis. EPA recommends that the term "pollutant of concern" be struck from the draft rule. The draft rule already includes other provisions that allow for distinguishing between significant and insignificant lowering of water quality for purposes of determining the extent of review under antidegradation. (USEPA)

Response: IDEM agrees that the definition for pollutant of concern resulted in unintended consequences and confusion. Therefore, in the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant" and the definition for regulated pollutant clarifies when an antidegradation review is triggered.

Comment: The determination of a significant or insignificant lowering of water quality must be based on the extent of expected change in ambient water quality. At 327 IAC 2-1.3-4(b)(1)(A)(i)(BB) and (CC), a de minimis threshold is included in the draft rule that is less than or equal to 20% of existing loading capacity for pollutants without published criteria or data sufficient to calculate a numeric criterion. IDEM justifies the de minimis percentage by stating that water quality values calculated using partial toxicity data may be overly stringent because of uncertainty in the data calculations to develop the numeric criterion. This is inconsistent with federal guidance on de minimis thresholds that requires that the significance of a new or increased discharge depends on the effect of the new or increased discharge on ambient water quality, not on the confidence a state has in the criteria derivation process. The criterion is only relevant in setting the absolute maximum allowable amount of pollutant that can be tolerated without negatively affecting the designated use of the waterbody. EPA recommends that for the high quality waters (HQWs) that are not Outstanding State Resource Waters (OSRWs) or Outstanding National Resource Waters (ONRWs), IDEM should delete 327 IAC 2-1.3-4(b)(1)(A)(i)(BB) and (CC) and apply the same 10% de minimis exemption referenced at 327 IAC 2-1.3-4(b)(1)(A)(i)(AA) to all new or increased discharges. (USEPA)

Response: The revised draft of the rule proposes a de minimis lowering of water quality of 10% or less (preserving 90%) of the available loading capacity for all high quality waters including OSRWs.

Comment: The draft rule at 327 IAC 2-1.3-4(b)(1)(A)(i)(DD) includes a cumulative cap on the de minimis lowering of water quality of 25% of the unused loading capacity. IDEM based

the 25% cap on the threshold use under the Clean Air Act to identify maximum allowable increases. Federal courts reviewing previous EPA approvals of state antidegradation provisions have found that de minimis provisions are only acceptable where both the individual actions are insignificant (i.e., de minimis) and the cumulative impacts of all the individual insignificant actions on a waterbody, taken together, are also insignificant. Kentucky Waterways Alliance, et al. v. EPA, et al. 540 F.3d 466 (6th Cir. 2008). In EPA's opinion, loss of up to a quarter of the remaining assimilative capacity of a surface water without antidegradation review is not insignificant. EPA recommends that for the HWQs that are not OSRW or ONRW, the draft rule should limit both individual and cumulative insignificant lowering of water quality to no more than 10% of the baseline assimilative capacity. (USEPA)

Response: The revised draft of the rule proposes a cumulative de minimis lowering of water quality of 10% or less (preserving 90%) of the available loading capacity for all high quality waters including OSRWs.

Comment: The antidegradation draft rule exempts certain actions that impact water quality from parts of the antidegradation requirement to demonstrate that a new or increased discharge is necessary to accommodate important social and economic development. Federal regulations allow new or increased discharges to lower water quality in high quality waters only after the lowering of water quality is demonstrated to be necessary to accommodate important social and economic development in the area in which the waters are located. While the "exemption demonstration" in the draft rule might address the federal requirement that any lowering of water quality be technologically necessary (no less degrading alternatives are available), it does not address the social and economic benefits component. To the extent that Indiana is finding, by rule, that the exempted actions are always socially and economically beneficial, Indiana must provide some factual information in the record supporting that assertion. Without such data and analysis in the record, the demonstration is incomplete and, therefore, inconsistent with the federal regulations. EPA recommends that these exemption provisions for these actions be removed from the antidegradation rule and addressed through the antidegradation review process on a case-by-case basis or provide the data and analysis necessary to satisfy the antidegradation demonstration requirement for all the activities that might fall under one of these exemptions. (USEPA)

Response: The draft rule has been revised to address the concerns about the exemptions by requiring some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit. IDEM believes that when a proposed action does not result in a significant lowering of water quality, then no degradation will occur and it is not necessary to evaluate the social or economic benefits to the area of the discharge.

Comment: 327 IAC 2-1.3-4(b)(3)(B) and 327 IAC 2-1.3-4(b)(4)(A) contemplate offsetting new or increased discharges with other actions within the same ten digit HUC. Offsetting provisions may be an acceptable basis for determining that antidegradation review is not triggered if it is clear that the offset results in no change in water quality at the point where the new or increased discharge will occur. It is not clear that the spatial relationship between such actions will be such as to ensure that this requirement will be met in all circumstances that would qualify for this exemption. EPA recommends that these exemption provisions for these actions be removed from the antidegradation rule and addressed through the antidegradation review

process on a case-by-case basis or provide the data and analysis necessary to satisfy the antidegradation demonstration requirement for all the activities that might fall under one of these exemptions. (USEPA)

Response: The draft rule has been revised to address the concerns about the exemptions by requiring some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit.

Comment: At 327 IAC 2-1.3-6(b)(13), the draft rule includes pollution prevention to mitigate degradation among a list of 15 components for inclusion in an antidegradation demonstration application. EPA recommends that the draft rule list of 15 components be rearranged so that pollution prevention is near the beginning of the list of required elements for inclusion in an antidegradation demonstration. EPA's Supplementary Information Document for Great Lakes basin regulations at 40 CFR 132 recommends a hierarchy of operations, or sequential analysis, focusing first on whether a significant lowering of water quality could be reduced or prevented through the application of prudent and feasible pollution prevention alternatives. (USEPA)

Response: Under Legislative Services Agency rule writing guidelines, the numbering of items does not mean that any one item is of greater importance or priority than any other – they are all of equal priority or importance. However, the revised draft of the rule does identify pollution prevention alternatives as necessary information to be provided in any level of an antidegradation demonstration.

Comment: The definition of "threatened or endangered species" should be expanded to better encompass the level of protection called for under the Endangered Species Act, specifically with regard to the protection of critical habitat. In accordance with the Endangered Species Act, actions must not "result in the destruction or adverse modification of designated critical habitat". EPA recommends inserting "and designated critical habitat" after "Species" in clause (A) of the definition as follows:

(57) "Threatened or endangered species" means the following:

(A) Species <u>and designated critical habitat</u> listed under Section 4 of the ESA*.

(B) Species listed as state threatened or endangered by the Indiana department of natural resources under IC 14-22-34.

(C) Species designated as state threatened or endangered species in the January 22, 1997, database for endangered, threatened, rare, and special concern species maintained by the Indiana natural heritage data center, division of nature preserves, department of natural resources**.

(USEPA)

Response: IDEM agrees that consideration should be given to protection of critical habitat. The definition referenced at IC 14-22-34-1 does speak to habitat:

"Sec. 1. (a) As used in this chapter, "endangered species" means any species or subspecies of wildlife whose prospects of survival or recruitment within Indiana are in jeopardy or are likely within the foreseeable future to become so due to any of the following factors:

(1) The destruction, drastic modification, or severe curtailment of the habitat of the wildlife.

(2) The overutilization of the wildlife for scientific, commercial, or sporting purposes.

(3) The effect on the wildlife of disease, pollution, or predation.

(4) Other natural or manmade factors affecting the prospects of survival or recruitment within Indiana.

(5) Any combination of the factors described in subdivisions (1) through (4).

(b) The term includes the following:

(1) Any species or subspecies of fish or wildlife appearing on the United States list of endangered native fish and wildlife (50 CFR 17, Appendix D).

(2) Any species or subspecies of fish and wildlife appearing on the United States list of endangered foreign fish and wildlife (50 CFR 17, Appendix A)."

Additionally, IDEM has, in the revised draft of the rule, made the suggested change to the rule definition.

Comment: Alternatively to modifying the definition of "threatened or endangered species", the draft rule could be revised to refer specifically to threatened and endangered species and any designated critical habitat as information that must be provided by applicants and considered by the director. In this case, EPA recommends that the rule language at 327 IAC 2-1.3-7(c)(3) also be revised to say: "The action would jeopardize state listed endangered or federally listed threatened and endangered species or result in the destruction or adverse modification of designated critical habitat." (USEPA)

Response: IDEM has, in the revised draft of the rule, made the suggested change to the rule definition.

Comment: With regard to the footnotes to the definition of "threatened or endangered species", EPA recommends that IDEM consider a way to update the state database of species so that new versions of the database, if available, would be used for the purpose of completing accurate and thorough assessments of the potential effects of antidegradation applications on listed species. (USEPA)

Response: The State's database of 'endangered, threatened, & rare species' is maintained by the Indiana Department of Natural Resources (IDNR). As noted in the footnote in the revised draft of the rule, the information is updated regularly and inquiries are responded to by the IDNR using the most current, updated version of the database.

Comment: The draft rule lacks definitions of the following terms that are integral to understanding how the rule works: (1) "application"; (2) "best available demonstrated control technology (BADCT); (3) "recommencing discharge"; and (4) new discharger". (USEPA)

Response: The revised draft of the rule does not include the terms "application", "recommencing discharger", or "new discharger"; therefore, those terms are not defined. Since these terms are not used in the rule, IDEM does not believe that the definition of these terms is integral to understanding the rule. The revised draft does include a definition for "BADCT".

Comment: With regard to antidegradation review of activities covered by general permits, the draft rule language at 327 IAC 2-1.3-1(c)(1) states, "The department shall complete an antidegradation review of the rules of the board that authorize NPDES general permits." is unclear which rules of the board are to be under consideration. Does it refer to Article 15 general permit general provisions, basic general permit rule requirements, notice of intent letter requirements, or standard conditions for general permits or does it refer to a specific permit by rule such as Rule 5 storm water run off associated with construction activity? The draft rule language should be revised to ensure that an antidegradation review is conducted on each general permit issued by the state. (USEPA)

Response: IDEM has begun the process of converting Indiana's general permits from a permit-by-rule format to entirely administratively issued general permits. Antidegradation requirements will be considered throughout the process, and it is IDEM's intent to conduct the appropriate level of antidegradation review on each administratively issued general permit. If the administratively issued general permit satisfies the antidegradation requirements, then any NOI that satisfies the general permit requirements will also satisfy the antidegradation requirements.

Comment: With regard to antidegradation review of activities covered by general permits, the draft rule language at 327 IAC 2-1.3-1(c)(3) states, "After an antidegradation review of a rule is conducted, activities covered by an NPDES general permit authorized by that rule are not required to undergo an additional antidegradation review." It is not clear how a permanent blanket exemption from antidegradation review is either appropriate or consistent with the federal antidegradation and permitting requirements. Since treatment and pollution control technologies change over time, regular reconsideration of the antidegradation review of general permits is warranted with each renewal of the general permit. (USEPA)

Response: IDEM has begun the process of converting Indiana's general permits from a permit-by-rule format to entirely administratively issued general permits. Administratively issued general permits will be renewed/re-issued every five years. Antidegradation reviews will be conducted when the administratively issued permits are renewed/re-issued.

AGRICULTURE

Comment: Indiana livestock operations regulated by federal NPDES permits are concerned how they would be affected under the requirements of the draft antidegradation rule. The agricultural community is concerned that once this rule takes effect efforts will be made to apply the rule requirements to agricultural production practices in a way that is not currently anticipated. Previous discussions have indicated that this rule will not apply to agricultural operations because they do not discharge; however, the language of the rule does not clearly indicate that the rule will not apply to agricultural operations. (IFB, IPP)

Response: Antidegradation review will be required on activities that require an NPDES permit to discharge. If an NPDES permit is issued to a CAFO with the allowance for a discharge, then, that NPDES permit will be subject to antidegradation review.

Comment: In general, livestock operations on the whole seldom discharge. Nonetheless, some operations are designed to discharge effluent such as noncontact cooling water. Other facilities may have an accidental discharge. Under federal NPDES permit requirements for Concentrated Animal Feeding Operations (CAFOs), livestock operations that discharge or propose to discharge will be required to obtain an NPDES permit, and facilities that have had accidental discharges may also be required to obtain an NPDES permit. Assuming those facilities with NPDES permits do discharge, it seems they would be at risk for being required to make an antidegradation demonstration. (IFB, IPP)

Response: If an NPDES permit is issued to a CAFO with the allowance for a discharge, then, that NPDES permit will be subject to an antidegradation review.

Comment: Existing rule language at 327 IAC 15-15-1(d) states, "Compliance with this rule and all applicable requirements for an NPDES general permit under article 15 *[this article]* shall meet the nondegradation requirements of 327 IAC 2-1." The rule language at 327 IAC 2-1-2(1) states, "No degradation of water quality shall be permitted which would interfere with or become injurious to existing and potential uses." If, as stated in 327 IAC 15-15-1(d), all CAFO general permits already meet the nondegradation standard of 327 IAC 2-1-2, then is this enough

to show that the CAFO general permit does not have to undergo the antidegradation review discussed in 327 IAC 2-1.3-1(c)? If it is so, then the fact that a CAFO general permit does not need to complete an antidegradation demonstration should be clearly stated in the draft antidegradation rule. (IFB, IPP)

Response: If a CAFO general permit does not allow for a discharge, then the CAFO general permit does meet the non-degradation standard.

Comment: Even if the antidegradation draft rule clearly stated that CAFO general permits do not need to undergo antidegradation review, it is still not clear that holders of individual CAFO permits would be excluded from antidegradation demonstration requirements. CAFO discharges do not lend themselves to antidegradation review and those discharges that do not meet the standard of an agricultural storm water discharge are so minimal that in almost every case there would be very little negative impact on the waters of the state. An actual point source discharge from a CAFO is almost always accidental so tracking the amount and frequency of such discharges is impossible. There would be no way to determine when operational expansion would trigger an increase of these sporadic discharges. If the antidegradation rule is intended to apply only to a proposed new or increased loading of a pollutant of concern to a surface water of the state, then there is no way to determine when this would occur for a CAFO. Even if a determination could be made, with no numeric standards for nutrients, successfully completing the antidegradation demonstration would be next to impossible. The logic that the antidegradation rule does not apply to CAFOs is understood, but the final rule should more clearly state this fact. (IFB, IPP)

Response: Antidegradation will be applied to the CAFOs that have the authority to discharge under a NPDES permit. If the CAFO general permit does not allow for a discharge, then the CAFO general permit does meet the non-degradation standard. If a NPDES permit is issued to a CAFO with the allowance for a discharge, then that NPDES permit will be subject to antidegradation review. Requiring an NPDES permit for a CAFO because it had an accidental discharge does not authorize future accidental discharges.

ENVIRONMENTAL COALITION

Comment: The draft antidegradation rule has voluminous exemptions for which IDEM has offered no compelling evidence that the exemptions are justified or reasonable; they have been essentially granted in an arbitrary and unnecessary manner. An exemption should be rare and supported by sufficient evidence that it is either physically impractical for a source to comply or there are not controls or methods that can be used to control the pollutant. (VWI)

Response: The draft rule has been revised to address the concerns about the exemptions by requiring some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit. IDEM believes that when a proposed action does not result in a significant lowering of water quality, then no degradation will occur and it is not necessary to evaluate the social or economic benefits to the area of the discharge.

Comment: The requirement that at least 25 people are required to petition for exemption review in the ten digit watershed or within 15 miles of where the loading will take place is an overly stringent requirement and places an undue burden on citizens who are only seeking to

protect the waters of the area in which they may live. Such petitions regarding exemptions should require no more than five petitioners and no requirement for residency since degrading the water quality in one area definitely impacts the water quality of downstream areas also. (VWI)

Response: The concept of the exemption review has been eliminated from the revised draft of the rule. The revised draft now requires some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality.

Comment: The use of high unemployment, low income, and poverty rates to justify exemptions is counter to Executive Order 12898 signed by President Clinton requiring agencies "to address environmental justice in minority and low income populations." Specifically, that Order states in Part, "1-101. Agency Responsibilities. To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and it territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Marian Islands." Granting exemptions to allow increased pollution in an area simply due to it being low income is directly opposed to the whole idea behind the Executive Order 12898. IDEM is bound through delegation and is authorized by the EPA to administer all federal laws applying to water in the state; therefore, IDEM is subject to the same provisions of Executive Order 12898. Claiming exemptions for areas because of any perceived economic issue is outside the provisions of Executive Order 12898. (VWI)

Response: Indiana's water quality standards are promulgated to protect the environment and human health of all citizens. The antidegradation implementation rule will not allow for violations of Indiana's water quality standards. Designated uses must be maintained and protected. In the revised draft rule, some level of an antidegradation demonstration is required for all of the activities that result in a significant lowering of water quality.

Comment: The members represented by the Environmental Coalition are in Indiana and surrounding states, and they will be directly affected and potentially injured by the implementation of Indiana's antidegradation rule. They are also affected by the continuing failure of Indiana to adopt an antidegradation rule that complies with the CWA. The purpose of a state antidegradation program, and the key principle of the antidegradation policy, is to maintain and protect existing water quality, even where that water quality is better than applicable water quality criteria. The U. S. EPA Region VIII Guidance states this principle directly:

> Antidegradation recognizes that existing water quality has inherent value worthy of protection. Thus, unlike other aspects of water quality standards that are directed toward attainment of fully-protective levels of water quality (as defined by the applicable criteria), the purpose of antidegradation is to maintain and protect *existing* levels of water quality. (U.S. EPA Region VIII Guidance: Antidegradation Implementation (August 1993), Page iii (emphasis added).

Another way of stating this principle is with reference to the available assimilative (loading) capacity of a waterbody. (Assimilative capacity can be defined as the amount of loading of a particular pollutant into a waterbody that can be allowed while at the same time protecting uses of the waterbody and assuring that the new or increased loading does not cause or contribute to a violation of water quality standards. EPA views the assimilative capacity of a waterbody as "a valuable natural resource." (Ephraim King, Director Office of Science and Technology, U.S. EPA, in guidance letter to Water Management Division Directors dated August 10, 2005.) In

order to protect this valuable resource, federal law requires states to "develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy." 40 CFR.131.12(a). States must submit these policies and procedures to EPA for review and approval consistent with federal law. 40 CFR131.6. (EC, VWI)

Response: IDEM agrees that the purpose of Indiana's antidegradation rule is to preserve existing water quality levels in the surface waters of the state. The antidegradation implementation rule will be submitted to EPA for approval once it is final adopted by the WPCB and approved by the Attorney General and signed by the governor.

Comment: The draft rule is not consistent with the CWA and is not properly approvable by EPA. The following comments summarize some of the major points from our detailed comments:

(1) The draft rule covers only pollutants that will have a "potentially detrimental effect on the designated or existing uses," which is equivalent to asking whether the discharge will have a "reasonable potential" to violate established state water quality criteria. (See 327 IAC 2-1.3-2(43).) Applying antidegradation only where a pollutant may have a "detrimental effect" so defined fails to protect the assimilative capacity of receiving waters (for example, the increment of water quality that is better than the levels necessary for protecting designated uses) and, therefore, violates 40 CFR 131.12(a)(2). This definition will also apparently exempt from antidegradation controls increased discharges of nitrogen, phosphorus, sediment, and other important pollutants that currently lack numeric water quality criteria in Indiana, even though these pollutants are well-known as major causes of impairment of Indiana waterbodies and waterbodies downstream from Indiana, including the Gulf of Mexico.

(2) The Draft Rule allows dischargers to avoid a full analysis of alternative treatment techniques by accepting limits based on a number of conditions labeled as "BADCT." (See 327 IAC 2-1.3-2(3) and 327 IAC 2-1.3-6(d)(1).) Even assuming that such an approach might be acceptable in theory, the current proposal if adopted would allow much unnecessary new pollution, in clear conflict with 40 CFR 131.12(a)(2).

(3) The draft rule fails to comply with EPA policy and recent court decisions regarding "de minimis" discharges. In the current version, dischargers can avoid antidegradation review by demonstrating "insignificant" impact on loading capacity. (See 327 IAC 2-1.3-4(b).) The calculations are complicated and will be difficult and expensive to implement. Furthermore, the current draft rule's de minimis procedures conflict with the legal requirement that a de minimis exception – if appropriate at all – should only apply "when the burdens of regulation yield a gain of trivial or no value." (See *Kentucky Waterways Alliance v. Johnson*, 540 F.3d 466, 483, 491 (6th Cir. 2008).) As in the Kentucky case, IDEM here has failed to carry its burden of justifying why the scenarios described in the draft rule are "truly de minimis" based on an "assessment of particular circumstances" in the record. *Id.* at 491.

(4) The draft rule contains a number of exemptions that have not and cannot be justified in the record. (See 327 IAC 2-1.3-4(b)(4).) In order to approve Indiana's rules, EPA would need to provide detailed technical analysis of the combined effect of all of these exemptions and determine whether all of the "Tier-2-review exemptions together permit significant degradation." (*Kentucky Waterways,* 540 F.3d at 492.) IDEM has presented no evidence that any of the four "exemptions," as a class of loadings, will have a de minimis impact upon the water quality of the impacted waters or are necessary to accommodate important social or economic development.

(5) The draft rule fails to clarify how antidegradation reviews will be conducted for general permits aside from a generic statement that "the department shall complete an antidegradation review of the rules of the board that authorize NPDES general permits." (327 IAC 2-1.3-1(c)(1).) This language fails to ensure that activities permitted under general permits will cause only de minimis new pollution, and there is nothing in the record to show that the general permits will individually and cumulatively allow only de minimis pollution.

(6) The draft rule focuses narrowly on NPDES permits and fails to adequately address how the requirements of 40 CFR 131.12 will be implemented for activities conducted pursuant to other circumstances, such as CWA Section 404 permits or Section 401 certifications.

(7) The draft rule exemptions for "short-term and temporary" lowering of water quality fail to address the fact that "short-term" discharges may still be unacceptable if they are of a sufficient magnitude to impact existing uses or significantly impact assimilative capacity. (See 327 IAC 2-1.3-4(a) and 327 IAC 2-1.3-4(b)(3)(C).)

(8) The draft rule inappropriately requires that "substantial weight" be given to "any applicable determination by a governmental entity." (See 327 IAC 2-1.3-6(c)(1).) If construed to require IDEM to give special deference to governmental bodies whose purpose is not implementation of the CWA, this provision unlawfully delegates CWA authority and undermines the federal requirement for the delegated entity (here IDEM) to make decisions on NPDES permits after allowing full public participation in the decision. (EC, VWI)

Response: (1) IDEM agrees that the definition for pollutant of concern resulted in unintended consequences and confusion. Therefore, in the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant", and the definition for regulated pollutant clarifies when an antidegradation review is triggered.

(2) The draft rule has been revised such that the acceptance of the BADCT limits does not preclude the need to conduct all of the other aspects of an antidegradation demonstration.

(3) The revised draft of the rule proposes a de minimis lowering of water quality of 10% or less (preserving 90%) of the available loading capacity for all high quality waters including OSRWs. IDEM believes this proposal is consistent with EPA policy and recent court decisions as well as state statute.

(4) The draft rule has been revised to address the concerns about the exemptions by requiring some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit. IDEM believes that when a proposed action does not result in a significant lowering of water quality, then no degradation will occur and it is not necessary to evaluate the social or economic benefits to the area of the discharge.

(5) IDEM has begun the process of converting Indiana's general permits from a permit-by-rule format to entirely administratively issued general permits. Antidegradation requirements will be considered throughout the process and it is IDEM's intent to conduct the appropriate level of antidegradation review on each administratively issued general permit. The administratively issued general permits will either address antidegradation for new or increased discharges or it will only cover the existing discharges that are not subject to antidegradation review.

(6) IDEM believes that the 401 water quality certification (which is incorporated into the 404 permit) requirements to avoid, minimize, and mitigate for impacts satisfies antidegradation review requirements. IDEM uses USACE guidance on 404 permitting when issuing 401 certifications. CFR 40 Part 230 Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material Subpart B--Compliance With the Guidelines Sec. 230.10 Restrictions on discharge, in part, says:

> "(a) Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.
>
> (1) For the purpose of this requirement, practicable alternatives include, but are not limited to:
>
> (i) Activities which do not involve a discharge of dredged or fill material into the waters of the United States or ocean waters;
>
> (ii) Discharges of dredged or fill material at other locations in waters of the United States or ocean waters;
>
> (2) An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. If it is otherwise a practicable alternative, an area not presently owned by the applicant, which could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the proposed activity may be considered.
>
> (3) Where the activity associated with a discharge which is proposed for a special aquatic site (as defined in subpart E) does not require access or proximity to or sighting within the special aquatic site in question to fulfill its basic purpose (i.e., is not "water dependent"), practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise. In addition, where a discharge is proposed for a special aquatic site, all practicable alternatives to the proposed discharge, which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise.
>
> (4) For actions subject to NEPA, where the Corps of Engineers is the permitting agency, the analysis of alternatives required for NEPA environmental documents, including supplemental Corps NEPA documents, will in most cases provide the information for the evaluation of alternatives under these Guidelines. On occasion, these NEPA documents may address a broader range of alternatives than required to be considered under this paragraph or may not have considered the alternatives in sufficient detail to respond to the requirements of these Guidelines. In the latter case, it may be necessary to supplement these NEPA documents with this additional information.
>
> (5) To the extent that practicable alternatives have been identified and evaluated under a Coastal Zone Management program, a section 208 program, or other planning process, such evaluation shall be considered by the permitting authority as part of the consideration of alternatives under the Guidelines. Where such evaluation is less complete than that contemplated under this subsection, it must be supplemented accordingly.
>
> (b) No discharge of dredged or fill material shall be permitted if it:

(1) Causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable State water quality standard;
(2) Violates any applicable toxic effluent standard or prohibition under section 307 of the Act;
(3) Jeopardizes the continued existence of species listed as endangered or threatened under the Endangered Species Act of 1973, as amended, or results in likelihood of the destruction or adverse modification of a habitat which is determined by the Secretary of Interior or Commerce, as appropriate, to be a critical habitat under the Endangered Species Act of 1973, as amended. If an exemption has been granted by the Endangered Species Committee, the terms of such exemption shall apply, in lieu of this subparagraph;
(4) Violates any requirement imposed by the Secretary of Commerce to protect any marine sanctuary designated under title III of the Marine Protection, Research, and Sanctuaries Act of 1972.

(c) Except as provided under section 404(b)(2), ***no discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States.*** Findings of significant degradation related to the proposed discharge shall be based upon appropriate factual determinations, evaluations, and tests required by subparts B and G, after consideration of subparts C through F, with special emphasis on the persistence and permanence of the effects outlined in those subparts. Under these Guidelines, effects contributing to significant degradation considered individually or collectively, include:

(1) Significantly adverse effects of the discharge of pollutants on human health or welfare, including but not limited to effects on municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites.
(2) Significantly adverse effects of the discharge of pollutants on life stages of aquatic life and other wildlife dependent on aquatic ecosystems, including the transfer, concentration, and spread of pollutants or their byproducts outside of the disposal site through biological, physical, and chemical processes;
(3) Significantly adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability. Such effects may include, but are not limited to, loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce wave energy; or
(4) Significantly adverse effects of discharge of pollutants on recreational, aesthetic, and economic values.

(d) Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem. Subpart H identifies such possible steps."

(7) The short-term temporary exemption requires that the discharge comply with the antidegradation standards which require designated uses be maintained and protected.

(8) It is a state statutory requirement that the Commissioner give substantial weight to any applicable determination by a governmental entity. However, the Commissioner of IDEM retains all of his authority to make a final permit decision on a new or increased discharge.

Comment: As required by federal law, IDEM must provide detailed responses to these comments and questions so that all parties are able to plan their activities with certainty and so that U.S. EPA has an adequate record for its review of the proposed antidegradation

implementation procedures under 33 CFR1313(c)(3). EPA's minimum public participation procedures for the revision of water quality standards require the state to provide specific responses to public comments, which are then made part of the record for EPA's evaluation. (*See* 40 CFR Part 25). One of the objectives of these requirements is "[t]o assure that government action is as responsive as possible to public concerns." (40 CFR Part 25.3). Further, it is imperative that IDEM not adopt procedures that will lead to unnecessary controversy in the future and that EPA not be asked to approve procedures that could be construed or implemented in a manner that is inconsistent with the CWA. Moreover, such clarity is also necessary to allow EPA to draft properly its decision document regarding the procedures which will have to address these issues. (EC, VWI)

Response: IDEM has, and will, continue to provide responses to all comments received during publicly noticed comment periods. Numerous public meetings have been held, and summaries of those meetings have been made available to the public.

Applicability

Comment: The antidegradation draft rule applicability at 327 IAC 2-1.3-1(b) includes some situations and excludes others. The inclusions should be much broader than the exclusions. To be consistent with the CWA, the antidegradation implementation procedures should apply to all regulatory decisions that result in new or increased loadings of pollutants, whether or not the new or increased loadings are associated with a new, renewed, or modified NPDES permit limit. IDEM recognized this in its responses to comments from its first comment period for the antidegradation rulemaking with the following response:

> The draft rule includes a trigger to conduct an antidegradation review when there is a new or increased loading of a pollutant of concern that results in a significant lowering of water quality in the receiving waterbody. There are some proposed discharges that will result in an increased loading of a pollutant of concern although there is no need for a new or modified NPDES permit limit. When those proposed discharges will result in a significant lowering of water quality, IDEM believes, an antidegradation review is warranted. The trigger proposed in the draft rule allows for an antidegradation review when there is increased loading that will significantly lower water quality, whether or not there is a need for a new or modified NPDES permit limit.

Draft rule section 1(b) expressly narrows the scope of entry into the rule to exclude the so-called "exemptions" located in draft rule section 4. For example, section 4(b)(2)(A) exempts from section 6 of the rule new or increased loadings of a pollutant "within the existing capacity and processes that are covered by an existing applicable permit." Section 4(b)(2)(A) exemption would presumably not apply to situations where there is no existing permit; where there is a change in existing capacity and processes covered by the permit; or otherwise where a new, renewed, or modified permit limit is required for the new or increased loading. (EC, VWI)

Response: The revised draft rule proposes the following applicability language: "Except as provided under section 4 of this rule, the antidegradation implementation procedures established by this rule apply to a proposed new or increased loading of a regulated pollutant to a surface water of the state that will result from a deliberate action including a change in process or operation that adds additional regulated pollutants or creates an increase in loading of a regulated pollutant already being discharged." The draft rule has been revised to address the concerns about the exemptions by requiring some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. In the revised draft, activities that

need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit. IDEM believes that when a proposed action does not result in a significant lowering of water quality, then no degradation will occur and it is not necessary to evaluate the social or economic benefits to the area of the discharge.

Comment: Draft rule section 1(b) is incomplete. In addition, section 1(b) should include pollutant loadings from projects requiring CWA Section 401 water quality certifications for federal permits, such as Coast Guard Section 10 permits, Federal Energy Regulatory Commission permits, and U.S. Army Corps of Engineers Section 404 permits. IDEM omits mention of CWA Section 401 certification from draft rule section 1(b) (and from the draft rule entirely), even though antidegradation clearly applies to Section 401 certifications. It is IDEM's stated position found in the Second Notice of Comment Period, LSA Document #08-764, page 7, that "in most cases, the avoidance and minimization and mitigation necessary to satisfy the CWA 401 certification and 404 permit requirements will also satisfy antidegradation demonstration requirements." But there is no indication in the record that IDEM has attempted to show that there is any truth to that blanket statement. As with general permits, if IDEM wants to exempt individual Section 401 certifications from antidegradation review, it must formally show in the administrative record that all such certifications will satisfy antidegradation demonstration requirements. EPA should not accept IDEM's claim without an analysis of whether the Section 401 certification process satisfies the antidegradation demonstration. Where in the record has IDEM shown with any formal analysis that the avoidance and minimization and mitigation necessary to satisfy the CWA Section 401 certification and Section 404 permit requirements will also satisfy antidegradation demonstration requirements? If not, why not? If so, where can the public obtain a copy of this analysis? (EC, VWI)

Response: IDEM believes that the 401 water quality certification (which is incorporated into the 404 permit) requirements to avoid, minimize, and mitigate for impacts satisfies antidegradation review requirements. IDEM uses USACE guidance on 404 permitting when issuing 401 certifications. CFR 40 Part 230 Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material Subpart B--Compliance With the Guidelines Sec. 230.10 Restrictions on discharge, in part, says:

> "(c) Except as provided under section 404(b)(2), ***no discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States.*** Findings of significant degradation related to the proposed discharge shall be based upon appropriate factual determinations, evaluations, and tests required by subparts B and G, after consideration of subparts C through F, with special emphasis on the persistence and permanence of the effects outlined in those subparts. Under these Guidelines, effects contributing to significant degradation considered individually or collectively, include:
>
> > (1) Significantly adverse effects of the discharge of pollutants on human health or welfare, including but not limited to effects on municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites.
> >
> > (2) Significantly adverse effects of the discharge of pollutants on life stages of aquatic life and other wildlife dependent on aquatic ecosystems, including the transfer, concentration, and spread of pollutants or their byproducts outside of the disposal site through biological, physical, and chemical processes;

(3) Significantly adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability. Such effects may include, but are not limited to, loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce wave energy; or
(4) Significantly adverse effects of discharge of pollutants on recreational, aesthetic, and economic values."

Comment: The following is suggested rule language for modification of the draft rule at 327 IAC 2-1.3-1(b): "Except as provided under section 4 of this rule, the antidegradation implementation procedures established by this rule apply to a proposed new or increased loading of a pollutant of concern to a surface water of the state, including but not limited to new or increased loadings authorized by NPDES permits, section 401 certifications, and section 404 permits." (EC, VWI)

Response: The revised draft rule proposes the following applicability language: "Except as provided under section 4 of this rule, the antidegradation implementation procedures established by this rule apply to a proposed new or increased loading of a regulated pollutant to a surface water of the state that will result from a deliberate action including a change in process or operation that adds additional regulated pollutants or creates an increase in loading of a regulated pollutant already being discharged."

Comment: The antidegradation draft rule applicability at 327 IAC 2-1.3-1(c) regarding general permits fails to clarify how antidegradation reviews will be conducted for general permits aside from a generic statement that "the department shall complete an antidegradation review of the rules of the board that authorize NPDES general permits." (327 IAC 2-1.3-1(c)(1).) IDEM must explain how it intends to apply antidegradation to activities authorized under general permits. See *Ohio Valley Environmental Coalition v. Horinko*, 279 F. Supp. 2d 732, 761-62 (S.D. W. Va. 2003) (rejecting West Virginia's exemption of activities covered under general permits from antidegradation review); see also U.S. EPA Region VII letters to Missouri Department of Natural Resources (dated 2/15/07 and 3/18/08) (requesting "additional information and clarity" on how Missouri will apply antidegradation to general permits, including clarification of the steps Missouri will take when it has "data or information indicating that a waterbody is being impacted by pollutants that could be discharged from facilities or activities covered under a general permit"). It is not acceptable for IDEM to simply require an antidegradation review of the board's general permit rules at some future point in time without describing what these antidegradation rules will actually require. The record fails to provide EPA with any means to determine whether these future procedures will comply with 40 CFR 131.12 for activities covered by NPDES general permits. See *Kentucky Waterways* 24 , 540 F.3d at 494 (requiring EPA to approve or deny a state's implementation procedures based on the record in front of the agency). Where in the record does IDEM indicate how antidegradation reviews for activities authorized by NPDES general permits will be conducted? (EC, VWI)

Response: IDEM has begun the process of converting Indiana's general permits from a permit-by-rule format to entirely administratively issued general permits. Antidegradation requirements will be considered throughout the process, and it is IDEM's intent to conduct the appropriate level of antidegradation review on each administratively issued general permit. The discharges currently covered by one of the general permits-by-rule (327 IAC 15-7 through 15-12) may be covered by an administratively issued general permit. There will be an antidegradation review for each category of discharger that may be eligible for coverage under one of the administratively issued general permits when the administratively issued general permits are being developed. The administratively issued general permits will either ensure antidegradation

for new or increased discharges or it will only cover the existing discharges that are not subject to antidegradation review (non-degrading). Antidegradation reviews for activities authorized by NPDES general permits will be conducted in accordance with the requirements outlined in this draft rule.

Comment: The draft rule language fails to ensure that activities permitted under general permits will cause only de minimis new pollution, and there is nothing in the record to show that the general permits will individually and cumulatively allow only de minimis pollution. As explained in *Kentucky Waterways*, EPA may not rely on a state's "commitment" that it will comply with antidegradation requirements. See *Kentucky Waterways*, 540 F.3d at 494. Where in the record has IDEM shown that activities permitted under general permits will cause only de minimis new pollution? (EC, VWI)

Response: IDEM has begun the process of converting Indiana's general permits from a permit-by-rule format to entirely administratively issued general permits. Antidegradation requirements will be considered throughout the process, and it is IDEM's intent to conduct the appropriate level of antidegradation review on each administratively issued general permit. The discharges currently covered by one of the general permits-by-rule (327 IAC 15-7 through 15-12) will be covered by an administratively issued general permit. There will be an antidegradation review for each category of discharger that may be eligible for coverage under one of the administratively issued general permits when the administratively issued general permits are being developed. The administratively issued general permits will either ensure antidegradation for new or increased discharges or it will only cover the existing discharges that are not subject to antidegradation review (non-degrading). Antidegradation reviews for activities authorized by NPDES general permits will be conducted in accordance with the requirements outlined in this draft rule.

Comment: The following is suggested rule language for modification of the draft rule at 327 IAC 2-1.3-1(c):

(c) For activities covered by an NPDES general permit authorized by rule, the following apply:

(1) The department shall complete an antidegradation review of the rules of the board that authorize NPDES general permits in order to ensure that individual and/or cumulative uses of the general permit will not have the potential to significantly degrade water quality of the State. The board shall describe in writing how the general permit or control program meets the antidegradation requirements of this Section at the time each general permit or program is approved.

(2) The board shall modify those rules for purposes of antidegradation compliance in cycles not to exceed five years.

(3) General permits may not be used to authorize activities that result in a lowering of water quality in outstanding national resource waters or outstanding state resource waters.

(4) After an antidegradation review of a rule is conducted, activities covered by an NPDES general permit authorized by that rule are not required to undergo an additional antidegradation review, provided that a public notice of intent to proceed under a general permit is published in a local paper and on the Department's webpage including:

(A) a list of the facilities involved and the receiving waters they may affect, and

(B) the method by which public comments will be considered.

(5) Where it appears, based on public comment or the Department's own determination, that an individual use or multiple cumulative uses of a general permit may result in a significant lowering of water quality, the Department shall either require additional

conditions for individual coverage which will prevent such degradation or require an individual permit.

(EC, VWI)

Response: IDEM appreciates the commenter submitting suggested language. The draft rule language on the antidegradation process for general permits is derived from statutory language. IDEM has begun the process of converting Indiana's general permits from a permit-by-rule format to entirely administratively issued general permits. Antidegradation requirements will be considered throughout the process, and it is IDEM's intent to conduct the appropriate level of antidegradation review on each administratively issued general permit. Administratively issued general permits have the same public process requirements as any other NPDES permit. Administratively issued general permits will be renewed/re-issued every five years. Antidegradation reviews will be conducted when the administratively issued permits are renewed/re-issued. If the administratively issued general permit satisfies the antidegradation requirements, then any NOI that satisfies the general permit requirements will also satisfy the antidegradation requirements. IDEM is evaluating the most efficient way to inform the public of the receipt of an NOI.

Definitions

Comment: The definition of "best available demonstrated control technology" or "BADCT" at 327 IAC 2-1.3-2(3) has several problems, and the BADCT definition and exception for increased loadings using BADCT should be deleted unless entirely reworked in concept and language. The draft rule allows dischargers to avoid a full analysis of alternative treatment techniques by accepting limits based on a number of conditions labeled as BADCT. Even assuming that such an approach might be acceptable in theory, the current BADCT definition, if adopted, would allow much unnecessary new pollution, in clear conflict with 40 CFR 131.12(a)(2). The definition lists a number of effluent limits for pollutants that are commonly associated with sewage treatment plants. The current proposal requires only certain domestic pollutants to be treated out of the many pollutants that <u>can</u> be treated in domestic wastewater. The definition fails to contain limits on many other pollutants for which there are feasible control technologies and that are known to impair Indiana waterbodies and waterbodies downstream from Indiana dischargers. Most notably no BADCT limit is set for phosphorus although numerous Publicly Owned Treatment Works (POTWs) discharging in the Great Lakes Basin (including Indiana POTWs) have been meeting a limit of 1.0 mg/L phosphorus for decades. Recently, the Environmental Appeals Board in *City of Attleboro, MA Department of Wastewater* upheld a limit of 0.1 mg/L for phosphorus, so even this more stringent limit is technically feasible. Why did IDEM omit phosphorus standards from the BADCT definition? What other wastewater pollutants for which there are feasible control technologies did IDEM decide to omit from the definition of BADCT, and why did IDEM omit them from the definition? (EC, VWI)

Response: The revised draft rule language proposes the following definition for BADCT: "Best available demonstrated control technology or BADCT means wastewater treatment capable of meeting the technology-based effluent limit (TBEL) established by the department under 327 IAC 5-5-2 that represents the best cost-effective treatment technology that is readily available." BADCT will be established by IDEM for categories of wastewater on a pollutant-by-pollutant basis. The draft rule has also been revised such that the acceptance of the BADCT limits does not preclude the need to conduct all of the other aspects of an antidegradation demonstration. If no BADCT limits exist, the permit limit will be based either on WQBEL or technology based limits.

Comment: The level of treatment required, even of the pollutants that must be treated, is not even close to the "best" treatment that has been shown to be feasible for those pollutants. There are certainly POTWs consistently meeting limits tighter than those set by BADCT for CBOD, TSS, ammonia, and total residual chlorine (TRC). The BADCT limit for chlorine, in fact, does not even meet the current Indiana TRC water quality standard and would allow violation of state water quality standards under some critical low flow conditions. The BADCT TRC limit appears to be based on outdated detection limits. Are the limitations in the definition of BADCT at least as strict as limitations included in any current NPDES permit in Indiana or surrounding states? If not, why not? (EC, VWI)

Response: The revised draft rule language proposes the following definition for BADCT: "Best available demonstrated control technology or BADCT means wastewater treatment capable of meeting the technology-based effluent limit (TBEL) established by the department under 327 IAC 5-5-2 that represents the best cost-effective treatment technology that is readily available." BADCT will be established by IDEM for categories of wastewater on a pollutant-by-pollutant basis. BADCT limits for a new wastewater treatment plant for sanitary wastewater are designed to require the best available demonstrated control technology. If a BADCT based effluent limitation for a regulated pollutant is less stringent than an applicable water quality based effluent limitation for the same regulated pollutant, then the NPDES permit will contain the water quality based effluent limitation.

IDEM recognizes that all wastewater treatment plants normally produce an effluent that is a better quality than the effluent limitations contained in the NPDES permit. The effluent limitations in the NPDES permits are maximum thresholds for the pollutants being discharged. All wastewater treatment plants produce effluent within a range of quality and the purpose of the effluent limitations is to ensure that the effluent quality stays at or below the effluent limitations. It is not reasonable to set the effluent limits so close to the optimum effluent quality that there is no allowance for small changes in effluent quality due to numerous daily fluctuations in the influent wastewater quality and volume.

Comment: At 327 IAC 2-1.3-2(3)(B), the BADCT definition allows IDEM to set BADCT on a "case-by-case basis" or through "best professional judgment" for lagoons, land application discharges, constructed wetlands, CSOs, and other "alternative treatment technologies." This discretion essentially swallows the rule and conflicts with the requirement that any permitted lowering of water quality be demonstrated to be "necessary" (see 40 CFR 131.12(a)(2)). The theoretical concept of BADCT is that it replaces a rigorous professional evaluation of different treatment options (for example, the "necessary" analysis of the antidegradation demonstration). There is no indication or justification that setting BADCT on a "case-by-case basis" or through "best professional judgment" can adequately replace such an evaluation. How will best available treatment technology be determined? Will it be determined through the alternatives analysis? Will setting BADCT on a "case-by-case basis" or through "best professional judgment" provide a means for determining "necessity" in compliance with 40 CFR 131.12(a)(2)? (EC, VWI)

Response: The revised draft rule proposes that all discharges that result in a significant lowering of water quality be required to evaluate non-degrading alternatives regardless of whether they accept any available BADCT limits. Once it has been established that the discharge is physically necessary (there are no non-discharging alternatives available), then the discharger may accept BADCT limits in lieu of conducting an analysis of less degrading alternatives. IDEM believes the establishment of BADCT for sanitary type wastewater is straightforward because the best available demonstrated control technology being employed to treat sanitary type wastewater

is well established.

Comment: The draft rule does not, but should, specify procedures for determining best available treatment technology and for updating BADCT when control technology improves. Why did IDEM omit a procedure for updating BADCT when control technology improves? How will the limits be updated? (EC, VWI)

Response: IDEM does not know in advance when new or improved technology will be available to treat wastewater for a particular pollutant. When IDEM officially approves the use of new or improved wastewater treatment technology for a pollutant, then IDEM will revise the applicable BADCT limits for that pollutant.

Comment: How does IDEM intend to satisfy the CWA's public participation requirements when setting BADCT limits? (EC, VWI)

Response: The BADCT limits will be established in a non-rule policy that must be presented to the Water Pollution Control Board for public comment. The public will also have the opportunity to comment on the draft NPDES permit that contains BADCT limits.

Comment: At 327 IAC 2-1.3-2(15), IDEM should define "degradation" more broadly, rather than just in reference to the NPDES program because antidegradation applies to any action resulting in a lowering of water quality and that is required to comply with water quality standards. Moreover, the acceptability and legality of this definition will depend on resolution of the issues identified in the comments section 4 of the draft rule, since the draft definition explicitly references the section 4 exemptions and some of the draft exemptions are inconsistent with the CWA. Why is the definition of degradation limited to the NPDES program, given that antidegradation policy applies to other water quality programs as well? How will Indiana's water quality management programs other than NPDES be addressed with respect to antidegradation? (EC, VWI)

Response: The language in the noticed draft rule was derived from the statutory definition of degradation. The revised draft, proposes the following definition: "Degradation means, for purposes of an antidegradation demonstration, the following:

> (A) For an ONRW, any new or increased discharge of a regulated pollutant, except for a short-term, temporary increase as described under section 4(a) of this rule.
>
> (B) For a HQW, including an OSRW, but excluding an ONRW, any new or increased loading of a regulated pollutant, except as provided under section 4 of this rule, to a surface water of the state that results in a significant lowering of water quality for that regulated pollutant."

IDEM believes that this definition does not contradict the intent of the statutory definition.

Comment: The following is suggested rule language for modification of the draft rule at 327 IAC 2-1.3-2(15): "Degradation" means, for purposes of an antidegradation demonstration, the following:

> (A) For an ONRW, any new or increased discharge of a pollutant of concern, except for a short-term, temporary, and limited increase as described under section 4(a) of this rule.
>
> (B) For an HQW, including an OSRW but excluding an ONRW, any new or increased loading of a pollutant of concern, except as provided under section 4 of this rule, to a surface water of the state that results in a significant lowering of water quality for that pollutant of concern.

(EC, VWI)

Response*:* The revised draft, proposes the following definition: "Degradation means, for purposes of an antidegradation demonstration, the following:

(A) For an ONRW, any new or increased discharge of a regulated pollutant, except for a short-term, temporary increase as described under section 4(a) of this rule.

(B) For a HQW, including an OSRW, but excluding an ONRW, any new or increased loading of a regulated pollutant, except as provided under section 4 of this rule, to a surface water of the state that results in a significant lowering of water quality for that regulated pollutant."

IDEM believes that this definition does not contradict the intent of the statutory definition.

Comment: At 327 IAC 2-1.3-2(18), the definition of "discharge" is unclear when considered with the draft rule's definition of "pollutant of concern," which is defined as a "pollutant" expected in a "discharge." The term "discharge" in the CWA is with reference to a "pollutant." Thus, it is unclear whether a discharge can contain a pollutant that is not a "pollutant of concern." In any case, why does the draft rule require a definition of "discharge"? Given that section 1(b) of the draft rule limits the applicability of the rule to "pollutants of concern," why not define "discharge" to be consistent with federal law and regulations? The following is suggested rule language for modifying the definition of "discharge":

(18) "Discharge" or "direct discharge", when used without qualification, means a discharge of a pollutant.

(EC, VWI)

Response: IDEM agrees that the definition for pollutant of concern resulted in unintended consequences and confusion. Therefore, in the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant" and the definition for regulated pollutant clarifies when an antidegradation review is triggered. The definition of discharge now refers to the discharge of a regulated pollutant.

Comment: At 327 IAC 2-1.3-2(43), the definition of "pollutant of concern" (POC) reflects in clause (A) the discussion and agreement of the subgroup in the stakeholder meetings. The subgroup accepted this language as long as IDEM clarifies the process for identifying new pollutants of concern in companion guidance. However, in clause (B), the definition adds a second component that is contrary to the CWA. The plain language of clause (B) says that a pollutant is a POC only if it is expected to be present in the receiving water at a concentration at or approaching that which would adversely affect uses, for example, at a concentration with a "reasonable potential" to violate established state water quality criteria. That is, a new or increased loading would not be subject to any antidegradation review unless the loading plus any existing amounts of the pollutant in the receiving water have the potential to harm aquatic organisms or make water undrinkable or unswimmable. But this definition completely contradicts the purpose of antidegradation, which is to protect water quality while it is still better than the levels necessary to protect designated and existing uses. (See Memorandum of Ephraim King August 10, 2005 (protection of assimilative capacity is major purpose of antidegradation).) Waiting until there is a potentially "detrimental effect" before conducting antidegradation review misses the whole point that antidegradation is meant to keep clean waters clean. Does IDEM intend to require an antidegradation review of a new or expanded discharge of pollutants only where that discharge has a "reasonable potential" to violate established water quality standards? If not, what purpose is served by the language in 327 IAC 2-1.3-2(43)(B)? If so, how is this approach consistent with the purpose of antidegradation to preserve loading capacity? (EC, VWI)

Response: IDEM agrees that the definition for pollutant of concern resulted in unintended consequences and confusion. Therefore, in the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant" and the definition for regulated pollutant clarifies when an antidegradation review is triggered.

Comment: The definition of POC may also exempt from antidegradation controls increased discharges of nitrogen, phosphorus, sediment, and other important pollutants that currently lack numeric water quality criteria in Indiana, even though these pollutants are well-known as major causes of impairment of Indiana waterbodies and waterbodies downstream from Indiana, including the Gulf of Mexico.[1] How does IDEM plan conduct antidegradation reviews for new or increased loadings of pollutants that do not currently have established numeric water quality criteria, such as phosphorus and nitrogen?
(EC, VWI)

Response: IDEM agrees that the definition for pollutant of concern resulted in unintended consequences and confusion. Therefore, in the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant" and the proposed definition of regulated pollutant is:
"Regulated pollutant" means any:

(A) parameter:

(i) for which water quality criteria have been adopted in or developed pursuant to 327 IAC 2-1 and 327 IAC 2-1.5;

(ii) including narrative and numeric criteria;

(iii) including nutrients, specifically phosphorus and nitrogen; and

(iv) excluding biological criteria, pH, and dissolved oxygen; and

(B) other parameter that may be limited in an NPDES permit as a result of, but not limited to:

(i) best professional judgment;

(ii) new source performance standards;

(iii) best conventional pollutant control technology;

(iv) best available technology economically achievable; or

(v) best practicable control technology currently available;

for the appropriate categorical guidelines of 40 C.F.R. 400 to 40 C.F.R. 471."
Pollutants that are considered to be regulated pollutants based on an applicable narrative water quality standard or a technology based effluent limits and that have a reasonable potential to cause or contribute to a water quality violation will be evaluated using the procedures found in the draft antidegradation implementation rule. The proposed definition explicitly identifies phosphorous and nitrogen as regulated pollutants.

Comment: The only concept in the draft rule's definition of POC that is consistent with the CWA is that for a pollutant to be a pollutant of concern there should be evidence that the pollutant could affect designated uses at some future loadings and concentrations, regardless of the actual or current loading in the receiving water and regardless of whether a water quality standard has been promulgated for that pollutant. Antidegradation is intended to preserve existing levels of water quality, regardless of whether the degradation is caused by one large discharge or many small discharges over time. Thus, a substance currently found at relatively small concentrations in a discharge or waterbody should not escape antidegradation review simply because the likely concentrations are currently too low to adversely affect designated uses. IDEM must maintain assimilative capacity for these substances well before they reach such

[1] State – EPA Nutrient Innovations Task Group, *An Urgent Call to Action – Report of the State-EPA Nutrient Innovations Task Group* August 27, 2009 pp. 2-11; Committee on the Mississippi River and the Clean Water Act, National Research Council. Mississippi River Water Quality and the Clean Water Act: Progress, Challenges, and Opportunities. Washington D.C. National Academies Press, 2008. http://www.nap.edu/catalog.php?record_id=12051; IDEM Clean Lakes Program, NLA Results show many Indiana Lakes with Algal Toxins, Water Control, Fall 2009 Vol. 21, No. 3. (Ex.6)

harmful concentrations. (EC, VWI)

Response: Pollutants that are considered to be regulated pollutants based on an applicable numeric or narrative water quality standard or a technology based effluent limit and that add a new or increased loading of that pollutant as a result of a deliberate action will be evaluated using the procedures found in the draft antidegradation implementation rule.

Comment: To more accurately reflect the proper concept for POC, the definition should state as follows:

> (43) "Pollutant of concern" means a pollutant that is reasonably expected to be present in a discharge based on the source and nature of the discharge.

This suggested language was the consensus language arrived at during the stakeholder working group sessions for this rulemaking. Following the September 16, 2008, stakeholder meeting, IDEM posed several questions including asking the stakeholders to suggest edits to the definition of "pollutant of concern" that had been proposed during the stakeholder meeting. IDEM's statement at the time was, "Remember, this language resulted from the discussion at the first subgroup meeting and was extensively reviewed at the second subgroup meeting. The review discussion did contemplate adding language to tie applicability to a "deliberative action". Please explain your reasoning for any proposed edits." The environmental groups responded that the language for the POC definition that resulted from the stakeholder meetings was acceptable. (EC, VWI)

Response: IDEM agrees that the definition for pollutant of concern resulted in unintended consequences and confusion. Therefore, in the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant". IDEM believes that the key concept of suggested definition for pollutant of concern is incorporated into the definition for a regulated pollutant because every pollutant that is evaluated for antidegradation will first be evaluated to determine if the pollutant is reasonably expected to be present in a discharge based on the source and nature of the discharge.

Comment: The way that total loading capacity is defined in the draft rule at 327 IAC 2-1.3-2(60) is not likely to protect Lake Michigan, in particular, from significant increases in pollution. For streams, the total loading capacity (TLC) for a pollutant would be calculated as follows:

> WQC x [(existing effluent flow) + (proposed new or increased effluent flow) + (stream design flow)]

where WQC is the applicable water quality criterion. If the units of WQC are mg/liter and the flows are in units of liters per day, then TLC is in mg per day.

For discharges to Lake Michigan, which will likely be subject to an alternate mixing zone, the TLC for a pollutant would be calculated as follows:

> WQC x [(alternate mixing zone volume)]

If the units of WQC are mg/liter and the mixing zone volume is in units of liters, then TLC is expressed in milligrams (for example, mass). But this is not a "mass loading rate," which is required for the proposed definition of TLC. The proper quantity for Lake Michigan, to be consistent with the proposed definition, is the flow (for example, volume per time) within an alternate mixing zone. The determination of whether a lowering of water quality is de minimis in section 4(b)(1) of the draft rule relies on the calculation of TLC. Regardless of whether TLC is calculated with units of mass or with units of mass per time, it appears questionable whether the approach used in the draft rule to calculate TLC will provide a meaningful determination of a de minimis threshold for new or increased discharges into Lake Michigan. Thus, the proposed definition of TLC may not protect Lake Michigan from significant increases in pollution loadings

unsupported by an antidegradation demonstration. The de minimis for Lake Michigan and other outstanding state resource waters should be set equal to the background concentration or "reference water quality." (See proposed de minimis language and rationale in the environmental coalition's comments on draft rule section 4(b)(1). How will the proposed approach to determining loading capacity be applied to new and increased discharges into Lake Michigan? What is the likely range of volumes for alternate mixing zones in Lake Michigan? How will this approach prevent significant lowering of water quality in Lake Michigan? (EC, VWI)

Response: The revised draft rule proposes language consistent with the existing rules for the Great Lakes found at 327 IAC 5-2-11.3(b)(1)(B)(iii)(AA), 327 IAC 5-2-11.7(c)(5)(A), 327 IAC 5-2-11.4(b)(2), and 327 IAC 5-2-11.4(b)(4).

The revised draft rule proposes the following definition for total loading capacity: "Total loading capacity" expressed as a mass loading rate per 24-hour period, for the waterbody in the area where the water quality is proposed to be lowered means the product of the applicable water quality criterion multiplied by the sum of the existing effluent flow, the proposed new or increased effluent flow, and the approved alternate mixing zone volume for Lake Michigan over a 24-hour period, or the stream design flow over a 24-hour period.

The alternate mixing zone for a discharge to Lake Michigan is determined using 327 IAC 5-2-11.4(b)(2) and 327 IAC 5-2-11.4(b)(4). The total loading capacity for a discharge into Lake Michigan, with an approved alternate mixing zone, is calculated by multiplying the water quality criterion concentration by (the existing effluent flow over a 24-hour period + the proposed new or increased flow over a 24-hour period and the alternate mixing volume (equal to the existing and proposed flow x the dilution ratio) over a 24-hour period.) A proposed new or increased discharge that does not have an approved alternate mixing zone for Lake Michigan will only have the available loading capacity created by the existing and proposed new or increased effluent flow. The portion of Lake Michigan where individual and cumulative increased discharges of a pollutant will be evaluated is limited to the alternate mixing zone or the effluent flow, when there is not an approved alternate mixing zone.

The only approved alternate mixing zone in Lake Michigan is for a volume of water equal to 815.6 million gallons per day. The discharge design flow is 21.7 million gallons per day. The discharge-induced mixing zone is calculated to extend a distance of 182 feet from the diffuser and its location will change as the current (water flow) direction changes. The dilution ratio is 37.1 (Lake Michigan) to 1 (effluent).

The discharge induced mixing zone is limited by 327 IAC 5-2-11.4(b)(2)(v) as follows: "In no case shall a mixing zone be granted that exceeds the area where discharge-induced mixing occurs." Within the alternate mixing zone, the water quality-based effluent limitations are calculated such that the effluent shall not exceed the chronic aquatic criterion at the edge of the discharge induced mixing zone. The discharge induced mixing zone for a discharge to Lake Michigan is equivalent to a site-specific zone of initial dilution. In a flowing stream, the discharge from a diffuser creates a large zone of initial dilution which shall not exceed the acute aquatic life criterion. The chronic aquatic life criterion mixing zone is typically based on ¼ of the stream design flow and the effluent flow. The chronic aquatic life criterion mixing zone is always larger than the discharge induced mixing zone. Therefore, a flowing stream is provided a larger mixing zone than Lake Michigan to achieve compliance with the chronic aquatic life criterion. The following example is taken from the BP Whiting NPDES permit and Wasteload Allocation:

Discharge Flow = 21.4 Million Gallons per Day (MGD)
Alternate Mixing Zone Dilution Flow = Discharge Flow x Dilution Ratio (37.1) = 793.4 MGD

Ammonia as N

Total Loading Capacity = Water Quality Criterion x Alternate Mixing Zone Dilution Flow = 4,399 pounds per day (lbs/day)

Used Loading Capacity = Monthly average Effluent Limits = 1,584 pounds per day

Available Loading Capacity (ALC) = Total Loading Capacity (TLC) – Used Loading Capacity (ULC) [monthly average effluent limit]
ALC = 4.399 lbs/day – 1,584 lbs/day = 2,815 lbs/day

The baseline available loading capacity = 90% of the initial ALC
Baseline ALC = 90% of 2,815 lbs/day = 2,534 lbs/day
De minimis Lowering of Water Quality = 10% of the ALC = 281.5 lbs/day

Any increase in the monthly average effluent limits for Ammonia greater than 10% of the ALC or that results in an ALC that is less than the baseline ALC will require the submittal of an antidegradation demonstration.

Comment: How will the draft rule's approach to determining loading capacity be applied to pollutants that lack numeric water quality criteria, in steams and lakes? How will this approach prevent significant lowering of water quality due to pollutants that lack numeric water quality criteria? (EC, VWI)

Response: It is not possible to determine the loading capacity of the receiving waterbody for a pollutant that does not have a numerical water quality criterion. Therefore, it is not possible to determine if the discharge of a pollutant that does not have a numerical water quality criterion will cause a significant lowering of water quality using a numerical approach based on loading capacity. However, if the pollutant, without a water quality criterion is known or believed to be present in the discharge and it has a technology based effluent limit or if the pollutant is known to cause or contribute to a violation of the narrative water quality standards found in 327 IAC 2-1-6(a) or 327 IAC 2-1.5-8(b), then the pollutant will be required to be included in the antidegradation demonstration.

Antidegradation standards

Comment: The draft rule divides the Tier 2.9 standard into three categories:
(1) 327 IAC 2-1.3-3(c)(1) applies to BCCs in OSRW waterbodies and portions of their tributaries within the Great Lakes Basin (includes Lake Michigan). No new or increased loading of a BCC is allowed unless the loading is exempted as nonsignificant under section 4 of the draft rule.
(2) 327 IAC 2-1.3-3(c)(2) applies to BCCs in OSRW waterbodies and portions of their tributaries outside the Great Lakes Basin. The standard applied is the same as the Tier 2 standard with its necessary and importance tests, with the additional requirement under IC 13-18-3-2, IC 13-18-3-14, and IC 13-11-2-50.5 that the applicant implement or fund a water quality improvement project.
(3) 327 IAC 2-1.3-3(c)(3) applies to non-BCC pollutants in OSRW waterbodies and portions of their tributaries within or outside the Great Lakes Basin (includes Lake

Michigan). The standard is the same as in 327 IAC 2-1.3-3(c)(2).
The standard applied in 327 IAC 2-1.3-3(c)(2) is the same as the standard applied in 327 IAC 2-1.3-3(c)(3). IDEM should explain why the standard applied in 327 IAC 2-1.3-3(c)(2) is the same as the standard applied in 327 IAC 2-1.3-3(c)(3) since subsection (c)(2) applies to BCCs and subsection (c)(3) applies to non-BCCs. The discharge of BCCs into OSRWs outside of the Great Lakes Basin should require more justification than the discharge of non-BCCs into OSRWs outside of the Great Lakes Basin. (EC, VWI)

Response: The discharge of BCCs to an OSRW is only prohibited within the Great Lakes Basin in accordance with 327 IAC 5-2-11.7(a)(3) which states:

> "For all discharges directly into an OSRW, the commissioner shall establish the following conditions in the permit applicable to the regulated facility:
>
> (A) The permit shall prohibit the regulated facility from undertaking any deliberate action that would result in a degradation of water quality of the OSRW, unless the action complies with applicable provisions of this section.
>
> (B) Whether or not the permit contains a limitation for a BCC, the permit shall require monitoring for any BCC known or believed to be present in the permitted discharge, from any point or nonpoint source over which the permittee has control. If there is an increase in loading of a BCC, above normal variability, attributable to a deliberate action, the permit shall require the discharger to notify the commissioner of the increase. If the increased discharge of the BCC does not qualify under at least one (1) of the exceptions under subsection (b) or (c) and is attributable to a deliberate action by the permittee, the commissioner shall require elimination of the increase."

The prohibition against any increase in the loading of a BCC to an OSRW in the Great Lakes basin, found only in Indiana rules, is above and beyond the requirements found in federal antidegradation regulations and guidance requirements. The federal regulations and guidance documents do not prohibit an increase in the loading of a BCC to any OSRW since the federal regulations and guidance documents do not address waters designated as OSRWs.
Since there is no federal requirement to prohibit an increase in the loading of a BCC to high quality waters, including OSRWs, there is also no need to place more stringent requirements in the Indiana rules.

Comment: The reasonableness of the Tier 2.9 standard also will depend on remedying the associated provisions in sections 4 and 8 of the draft rule. In 327 IAC 2-1.3-3(c)(1), IDEM applies a relatively weak standard to BCCs in the Great Lakes Basin (for example, a new or increased loading is allowed if the applicant meets one of the exemptions in section 4 of the draft rule). Because several of the exemptions in section 4 are not appropriate, specifically the section 4(b)(4) exemptions, the Tier 2.9 standard is unreasonably weakened. The problems with the section 4(b)(4) exemptions also apply to the standards in 327 IAC 2-1.3-3(c)(2) (BCCs outside the Great Lakes Basin) and 327 IAC 2-1.3-3(c)(3) (non-BCCs). (EC, VWI)

Response: The draft rule has been revised to address the concerns about the exemptions by requiring some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit.

Exemptions from the antidegradation demonstration requirements

Comment: At 327 IAC 2-1.3-4(a) regarding exemptions concerning ONRWs, exemptions from antidegradation requirements for short term and temporary lowering of water quality are consistent with the applicable federal requirements only if the exemption includes: (1) a limitation on the magnitude of the impact; and (2) a procedure for responding to multiple requests for exemptions and the cumulative effects of multiple short-term impacts. IDEM's draft provision includes neither. EPA Region VIII guidance speaks directly to the issue of an exemption for short-term loading of pollutants into ONRWs. (See U.S. EPA Region VIII Guidance: Antidegradation Implementation (August 1993), Part IV(D), Page 11) The EPA views this exemption as requiring both a time component and a magnitude component. EPA uses the term "temporary and limited effect":

> A direct or upstream source that would result in a temporary *and* limited effect on ONRW water quality may be authorized. . . . As a *non-binding* rule of thumb, activities with durations less than one month *and* resulting in less than a 5% change in ambient concentration will be deemed to have temporary and limited effects.

(Emphasis in original). The EPA guidance also sets forth several other factors that may be considered when deciding to grant this exemption:

> Decisions on individual proposed activities may be based on the following factors: (a) length of time during which water quality will be lowered, (b) percent change in ambient concentrations, (c) parameters affected, (d) likelihood for long-term water quality benefits to the segment, (e) degree to which achieving applicable water quality standards during the proposed activity may be at risk, and (f) potential for any residual long-term influences on existing uses.

IDEM's exemption for ONRWs in the draft rule addresses the time of the activity and effect only, and not the magnitude of effect or any other factor listed in the EPA guidance. The provision as written is not likely to sufficiently protect ONRW water quality from even a time-limited loading of pollutants unless the magnitude of the impact – both individually and cumulatively - is considered. Why does 327 IAC 2-1.3-4(a) substantially deviate from EPA guidance on this exemption by omitting a limitation on the magnitude of the allowable effect as well as other applicable factors recommended by EPA? How will IDEM handle more than one request for a short-term and temporary discharge to an ORNW? (EC, VWI)

Response: For short-term, temporary discharges, all reasonable methods for minimizing or preventing the new or increased loading must be taken. Any short-term, temporary discharge authorized in a NPDES permit will be required to meet any applicable water quality-based effluent limitations. IDEM believes that when a discharge is in compliance with the applicable water quality-based effluent limitations, there should not be any short-term or long-term detrimental effects to the receiving waterbody. The referenced EPA guidance is from Region VIII and is just a "non-binding rule of thumb" for facilities in Region VIII. Additionally, EPA does not provide a definition for 'temporary' and 'short-term' under 40 CFR 131.12(a)(3) nor does it mention a limitation on the magnitude of the allowable effects.

Comment: The provision at 327 IAC 2-1.3-4(a) regarding exemptions concerning ONRWs should clarify that it applies only to the Tier 3 antidegradation standard for HQWs that are in ONRWs, and does not excuse compliance with the Tier 1 antidegradation standard at 327 IAC 2-1.3-3(a). (EC, VWI)

Response: As stated in 327 IAC 2-1.3-4(a), Tier 1 antidegradation standards will protect existing uses and the level of water quality necessary to protect these uses will be maintained.

Comment: The following is suggested rule language for 327 IAC 2-1.3-4(a):

(a) For an ONRW, an exemption from the antidegradation demonstration requirements included in section 6 of this rule shall be allowed only for new or increased short-term, temporary, and limited discharges of non-BCCs if the following conditions are met:

(1) All reasonable methods for minimizing or preventing the new or increased loading have been taken.

(2) The discharge will last less than twelve (12) months or three hundred sixty-five (365) days.

(3) A proposed new or existing discharger applies for and receives authorization from the commissioner.

(4) The discharge will result only in a short-term, temporary (not to exceed twelve (12) months) lowering of water quality.

(5) The discharge, by itself and along with additional discharges to the ORNW exempted under this subsection, will not result in more than a 2.5% change in the ambient concentrations of the pollutants discharged.

(6) The lowering of water quality will not put at risk achieving applicable water quality standards during the proposed activity or have a potential for any residual long-term influences on existing uses.

(7) The discharge complies with the antidegradation standard outlined in section 3(d) of this rule.

(EC, VWI)

Response: IDEM appreciates the commenter submitting suggested language. However, IDEM does not believe it is appropriate to require Region VIII's suggested guidance. IDEM believes that when a discharge is in compliance with the applicable water quality-based effluent limitations, there should not be any short-term or long-term detrimental effects to the receiving waterbody. Since any short-term, temporary discharge authorized in a NPDES permit will be required to meet any applicable water quality-based effluent limitations, water quality is sufficiently protected by the draft rule language requirements.

De minimis lowering of water quality

Comment: At 327 IAC 2-1.3-4(b)(1), the draft rule regarding the de minimis exemption contains two components: (1) a maximum percentage of the unused loading capacity that may be allocated to each applicant ("applicant de minimis"); and (2) a percentage of the total loading capacity that must remain after loading capacity is allocated to all applicants cumulatively ("cumulative cap"). For waters not designated as ONRW or OSRW, the draft rule divides the de minimis exemption into three categories:

(1) 327 IAC 2-1.3-4(b)(1)(A)(i)(AA) applies to <u>non-BCC</u> pollutants. Applicant de minimis is ten percent of the existing unused loading capacity of the waterbody, mixing zone, or other delineated area.

(2) 327 IAC 2-1.3-4(b)(1)(A)(i)(BB) applies to <u>non-BCC</u> <u>toxic</u> substances, with no water quality criterion, in waters <u>outside</u> the Great Lakes Basin. Applicant de minimis is 20 percent of the existing unused loading capacity.

(3)327 IAC 2-1.3-4(b)(1)(A)(i)(CC) applies to <u>non-BCC</u> <u>toxic</u> substances, with no water quality criterion, in waters <u>within</u> the Great Lakes Basin. Applicant de minimis is 20 percent of the existing unused loading capacity, same as in (BB).

For every request after the time of the permit issuance for the initial increase in the loading of a

pollutant, the unused loading capacity remaining after the applicant's increased loading must be greater than or equal to 75 percent of the unused loading capacity established at the time of the permit issuance for the initial increase in the loading of a pollutant of concern.

For waters designated as OSRW (for example, for Tier 2.9 protected waters), the draft rule divides the de minimis exemption into three categories:

(1) 327 IAC 2-1.3-4(b)(1)(B)(i)(AA) applies to non-BCC pollutants. Applicant de minimis is one percent of the existing unused loading capacity of the waterbody, mixing zone, or other delineated area.

(2) 327 IAC 2-1.3-4(b)(1)(B)(i)(BB) applies to non-BCC toxic substances, with no water quality criterion, in waters outside the Great Lakes Basin. Applicant de minimis is two percent of the existing unused loading capacity.

(3) 327 IAC 2-1.3-4(b)(1)(B)(i)(CC) applies to non-BCC toxic substances, with no water quality criterion, in waters within the Great Lakes Basin. Applicant de minimis is two percent of the existing unused loading capacity, same as in (BB).

For every request after the time of the permit issuance for the initial increase in the loading of a pollutant, the unused loading capacity remaining after the applicant's increased loading must be greater than or equal to 97.5 percent of the unused loading capacity established at the time of the permit issuance for the initial increase in the loading of a pollutant of concern. Generally, IDEM should consider a more streamlined alternative to the extremely complex and lengthy de minimis approach in the draft rule. For some circumstances and waters, a de minimis threshold set at the criterion level of the pollutant discharged at the end of the pipe, or at a predetermined dilution ratio, or at background concentration, may be easier to implement and just as protective of water quality as the loading capacity approach used in the draft rule. IDEM should develop the record showing whether and under what circumstances these simpler approaches to de minimis are at least as stringent as the loading capacity approach, particularly for Lake Michigan where the loading capacity approach is very problematic. (EC, VWI)

Response: IDEM is confident that the determination of total and available loading capacity reflects the situation occurring in the receiving waterbody at the receiving waterbody's stream design flow.

Comment: Although U.S. EPA has approved de minimis exceptions in the past, recent events and court decisions have made clear that U.S. EPA's authority to approve de minimis exceptions is now "quite limited." (See *Kentucky Waterways*, 540 F.3d at 484 n. 12.) IDEM has not developed a record that would allow U.S. EPA to approve the de minimis approach proposed here. Furthermore, the regulatory complexity in these rules should be avoided as a matter of policy because it limits effective public participation, increases compliance costs for the regulated community, and requires more government resources to administer. The draft rule creates incentives for dischargers to spend time and money documenting reasons why their activities should be exempt from antidegradation review instead of simply focusing efforts on performing Tier 2 reviews. (EC, VWI)

Response: The revised draft of the rule proposes a de minimis lowering of water quality of 10% or less (preserving 90%) of the available loading capacity for all high quality waters including OSRWs. IDEM believes this proposal complies with EPA policy (including recommendations found in the supplemental information document for the Great Lakes Initiative) and recent court decisions as well as state statute. Additionally, the draft rule has been revised to address the concerns about the non-de minimis exemptions by requiring some level of an antidegradation demonstration for all of the activities that result in a significant lowering of

water quality.

De minimis

Comment: The draft rule's approach to applying de minimis to Lake Michigan is likely impracticable in application and is likely to allow significant increases in pollutant loadings without an antidegradation demonstration. According to draft rule section 4(b)(1), the determination of whether a lowering of water quality is de minimis in relies on the calculation of TLC. The proposed calculation of TLC for Lake Michigan uses the volume of an alternate mixing zone, which produces a result in units of mass rather than in units of mass per time. In either case, IDEM has presented no justification that the approach used in the draft rule to calculate TLC will provide a meaningful determination of a de minimis threshold for new or increased discharges into Lake Michigan and protect Lake Michigan from significant increases in pollution loadings. (EC, VWI)

Response: The revised draft rule proposes language consistent with the existing rules for the Great Lakes found at 327 IAC 5-2-11.3(b)(1)(B)(iii)(AA), 327 IAC 5-2-11.7(c)(5)(A), 327 IAC 5-2-11.4(b)(2), and 327 IAC 5-2-11.4(b)(4).

The revised draft rule proposes the following definition for total loading capacity:

"Total loading capacity" expressed as a mass loading rate per 24-hour period, for the waterbody in the area where the water quality is proposed to be lowered means the product of the applicable water quality criterion multiplied by the sum of the existing effluent flow, the proposed new or increased effluent flow, and the approved alternate mixing zone volume for Lake Michigan over a 24-hour period, or the stream design flow over a 24-hour period.**"**

The alternate mixing zone for a discharge to Lake Michigan is determined using 327 IAC 5-2-11.4(b)(2) and 327 IAC 5-2-11.4(b)(4). The total loading capacity for a discharge into Lake Michigan, with an approved alternate mixing zone, is calculated by multiplying the water quality criterion concentration by (the existing effluent flow over a 24-hour period + the proposed new or increased flow over a 24-hour period and the alternate mixing volume (equal to the existing and proposed flow x the dilution ratio) over a 24-hour period). A proposed new or increased discharge that does not have an approved alternate mixing zone for Lake Michigan will only have the available loading capacity created by the existing and proposed new or increased effluent flow. The portion of Lake Michigan where individual and cumulative increased discharges of a pollutant will be evaluated is limited to the alternate mixing zone or the effluent flow, when there is not an approved alternate mixing zone.

The discharge induced mixing zone is limited by 327 IAC 5-2-11.4(b)(2)(v) as follows: "In no case shall a mixing zone be granted that exceeds the area where discharge-induced mixing occurs." Within the alternate mixing zone, the water quality-based effluent limitations are calculated such that the effluent shall not exceed the chronic aquatic criterion at the edge of the discharge induced mixing zone. The discharge induced mixing zone for a discharge to Lake Michigan is equivalent to a site-specific zone of initial dilution. In a flowing stream, the discharge from a diffuser creates a large zone of initial dilution which shall not exceed the acute aquatic life criterion. The chronic aquatic life criterion mixing zone is typically based on ¼ of the stream design flow and the effluent flow. The chronic aquatic life criterion mixing zone is always larger than the discharge induced mixing zone. Therefore, a flowing stream is provided a larger mixing zone than Lake Michigan to achieve compliance with the chronic aquatic life criterion. The following example is taken from the BP Whiting NPDES permit and Wasteload Allocation:

Discharge Flow = 21.4 Million Gallons per Day (MGD)
Alternate Mixing Zone Dilution Flow = Discharge Flow x Dilution Ratio (37.1) = 793.4 MGD

Ammonia as N

Total Loading Capacity = Water Quality Criterion x Alternate Mixing Zone Dilution Flow = 4,399 pounds per day (lbs/day)

Used Loading Capacity = Monthly average Effluent Limits = 1,584 pounds per day

Available Loading Capacity (ALC) = Total Loading Capacity (TLC) – Used Loading Capacity (ULC) [monthly average effluent limit]
ALC = 4.399 lbs/day – 1,584 lbs/day = 2,815 lbs/day

The baseline available loading capacity = 90% of the initial ALC
Baseline ALC = 90% of 2,815 lbs/day = 2,534 lbs/day
De minimis Lowering of Water Quality = 10% of the ALC = 281.5 lbs/day

Any increase in the monthly average effluent limits for Ammonia greater than 10% of the ALC or that results in an ALC that is less than the baseline ALC will require the submittal of an antidegradation demonstration.

Comment: The de minimis approach used in the draft rule would be most applicable for streams with design flows much greater than effluent flows. In that case, the total loading capacity can be estimated at the time of the first antidegradation application, and the use of that capacity can be tracked as it declines due to subsequent discharges. However, there is no evidence that the approach is appropriate for large bodies of water such as Lake Michigan. As IDEM appears to recognize, the loading capacity applied to discharges into the Indiana waters of Lake Michigan cannot be based on the capacity of the entire lake. Pollutants discharged into Lake Michigan are not uniformly dispersed into the lake. Instead, pollutants are often transported up or down the shoreline depending on the direction of currents. So, if the loading capacity concept is to be used for Lake Michigan, some volume or flow of water smaller than the entire Indiana portion of the lake must be considered. Using IDEM's approach in the draft rule, however, each new or increased discharge into Lake Michigan will be based on the volume within different and separate alternate mixing zones, where each new alternate mixing zone starts with a clean slate. In these circumstances, how will IDEM calculate the benchmark unused loading capacity required in draft rule section 4(b)(1)? The benchmark ALC is equal to 99% of the ALC established at the time of the permit issuance for the initial increase in the loading of a regulated pollutant. The benchmark ALC = the TLC – ULC. The ULC is based on the representative background concentration and the monthly average permit limits contained in the discharger's existing permit. What if the first permitted alternate mixing zone (for the initial increase in loading of the pollutant), on which the benchmark unused loading capacity is to be based under draft rule section 4(b)(1), is much larger than subsequent mixing zones? In effect, as the draft rule is currently written, the total loading capacity and benchmark unused loading capacity will become a moving target as each new alternate mixing zone is granted. The existing approved alternate mixing zones will be used to determine TLC. How will the proposed approach to determining loading capacity be applied to new and increased discharges into Lake Michigan? For new dischargers, there will be no approved alternate mixing zone and therefore, no ALC.

What are the assumptions and limitations of this approach? One assumption is that all new and existing dischargers are not entitled to a mixing zone prior to the submission of antidegradation demonstration. How will the cumulative cap (for example, the "benchmark unused loading capacity") be determined for Lake Michigan if each de minimis exemption is determined based on a different and spatially separate alternate mixing zone volume? (EC, VWI).

Response: The available loading capacity for a new discharge into Lake Michigan is zero because the new discharger will not have an approved alternate mixing zone. Therefore, every new discharger to Lake Michigan will be required to submit an antidegradation demonstration and satisfy the requirement to either implement a water quality improvement project or pay a fee because Lake Michigan is an OSRW. The alternate mixing zone may be requested at the time of the antidegradation demonstration is submitted to IDEM.

Comment: If the concept of loading capacity is to be used for Lake Michigan, IDEM must provide evidence and justification that the proposed approach will provide a meaningful determination of a cumulative de minimis threshold and will protect Lake Michigan from significant increases in pollutant loadings unsupported by an antidegradation demonstration. IDEM should begin by explaining how the concepts of total loading capacity, benchmark unused loading capacity, and cumulative used loading capacity will be made consistent with the fact that each proposed new or increased loading into Lake Michigan will be discharged into a "new" alternate mixing zone that has not received any prior discharges. (EC, VWI).

Response: For dischargers to Lake Michigan, the cumulative cap is applicable only to existing dischargers that already have an approved alternate mixing zone. Any discharger without a pre-existing alternate mixing zone that proposes a new or increased discharge will be required to submit an antidegradation demonstration.

Comment: If a de minimis approach is to be used for Lake Michigan, IDEM must provide evidence and justification that this approach will provide a meaningful determination of a cumulative de minimis threshold and will protect Lake Michigan from significant increases in pollution loadings. (See *Kentucky Waterways*, 540 F.3d 466 (6th Cir. 2008.) The existing record does not support IDEM's proposed method for determining a "total loading capacity" for discharges into Lake Michigan based on an alternate mixing zone. (EC, VWI)

Response: The proposed definition for total loading capacity is consistent with the existing antidegradation rule for OSRWs within the Great Lakes basin and the rules for an alternate mixing zone in Lake Michigan. A proposed new or increased discharge that does not have an approved alternate mixing zone for Lake Michigan will not have any available loading capacity. The portion of Lake Michigan where individual and cumulative increased discharges of a pollutant will be evaluated is limited to the alternate mixing zone.The discharge induced mixing zone is limited as follows in 327 IAC 5-2-11.4(b)(2)(v):

> "In no case shall a mixing zone be granted that exceeds the area where discharge-induced mixing occurs."

Within the alternate mixing zone, the water quality-based effluent limitations are calculated such that the effluent shall not exceed the acute aquatic criterion at the edge of the zone of initial dilution and it will not exceed the chronic aquatic criterion at the edge of the discharge induced mixing zone.

The (unused) available loading capacity for a discharge to any OSRW is determined as follows in 327 IAC 5-2-11.7(c)(4)(B):

> "Unused loading capacity means that amount of the total loading capacity not utilized by point source and nonpoint source discharges.**"**

The de minimis lowering of water quality mass value is based on the available (unused) loading

capacity and, in the case of a discharge to Lake Michigan, the total and available loading capacity is limited to the alternate mixing zone and the alternate mixing zone volume. A new or increased discharge at or below the de minimis lowering of water quality will ensure that at least 90% of the available loading capacity remains within the alternate mixing zone.

Comment: The de minimis for Lake Michigan and other OSRWs should be set equal to the background concentration or "reference water quality." (EC, VWI)

Response: The de minimis lowering of water quality is a concept of allowing the receiving waterbody to have a minimal lowering of water quality. So, a de minimis lowering of water quality presumes that there will be a lowering of water quality. Therefore, the de minimis lowering of water quality cannot be set at a level which is less than or equal to the representative background level because when the concentration of the pollutant in the receiving waterbody is less than or equal to the representative background level, there is no lowering of water quality. A lowering of water quality will only occur when the concentration of the pollutant outside of the mixing zone is greater than the representative background concentration. See 327 IAC 5-2-11.3(b)(1)(B)(i).

Cumulative cap

Comment: The draft rule's cumulative cap (benchmark unused loading capacity) of 75 percent for non-OSRWs is unjustified and likely violates the CWA. The draft rule fails to comply with EPA policy and recent court decisions regarding "de minimis" discharges. At most, IDEM only has the implied authority to create de minimis exemptions "when the burdens of regulation yield a gain of trivial or no value." *(Kentucky Waterways*, 540 F.3d.at 491.) As explained by the Court, this "naturally will turn on the assessment of particular circumstances, and the agency will bear the burden of making the required showing." (*Id*.) In the draft rule, dischargers can avoid antidegradation review by demonstrating "insignificant" impact on loading capacity. As in the Kentucky case, IDEM here has failed to carry its burden of justifying why the scenarios described in the draft rule are "truly de minimis" based on an "assessment of particular circumstances" in the record. In addition to its complexity, the de minimis provision apparently allows up to 25 percent of the initial assimilative capacity of a waterbody to be consumed without any antidegradation review in certain situations (see draft rule section 4(b)(1)(A)(i)(DD)). IDEM has failed to include any analysis or authority in the record suggesting that a 25 percent reduction in water quality could possibly be considered insignificant. EPA recently disapproved proposed Utah antidegradation rules because they allowed a cumulative de minimis of more than ten percent. Where in the record has IDEM demonstrated that the regulatory burdens of performing Tier 2 reviews for discharges allowing up to a 25 percent cumulative lowering of water quality would yield benefits of "trivial or no value"?
(EC, VWI)

Response: The draft rule has been revised to reflect a de minimis threshold that is of 10% or less (preserving 90%) of the existing available loading capacity determined at the time of the specific proposed new or increased loading of the regulated pollutant. The available loading capacity shall be established at the time of each request for a new or increased loading of a regulated pollutant. The benchmark available loading capacity is equal to ninety percent (90%) of the available loading capacity established at the time of the first request for an increase in the loading of a regulated pollutant (the initial increase). For every subsequent request after the initial increase of a regulated pollutant, the available loading capacity remaining after the net

increase in the loading of a regulated pollutant must be greater than or equal to the benchmark available loading capacity.

Comment: If IDEM intends the de minimis exemption to be available where no new or modified permit limits are involved, the benchmark unused loading capacity should be defined as a percentage of the unused loading capacity established at the time of the initial increase in the loading of a pollutant of concern to account for changes in loading that do not require a new or modified permit limit. How will IDEM track the consumption of the benchmark unused loading capacity, which is determined at the time of the initial increase in loading for the pollutant, given that the total loading capacity may increase over time with subsequent dischargers to a waterway due to additions and dominance of effluent flows (for most NPDES discharge situations into rivers and streams in Indiana, the size of the ULC will be more a function of the effluent flow size, not the stream flow)? (EC, VWI)

Response: IDEM does not intend for the de minimis exemption to be available where no new or modified permit limits are involved. The representative background concentration required to calculate the available loading capacity will capture any quantity of pollutant not included in the permit, but present in the discharge.

Comment: In October 2008, several of the undersigned environmental groups presented IDEM with suggested language for implementing a lawful de minimis approach based on consumption of loading capacity. That suggested language is made part of these comments as Attachment B. That suggested language would include changing the cumulative cap (for example, benchmark unused loading capacity) on de minimis discharges from 75% to 90% of the "reference water quality" (for example, the unused loading capacity established at the time of the initial increase in the loading of a pollutant of concern), and include an adequate justification in the record. (EC, VWI)

Response: IDEM considered the suggested language when making proposed revisions to the rule. The revised draft rule establishes a benchmark available loading capacity equal to 90% of the available loading capacity at the time of the first request to lower water quality in a high quality water, including Lake Michigan.

De minimis for toxics

Comment: The draft rule's applicant de minimis of 20 percent of existing unused loading capacity for toxics is unjustified and likely violates the CWA. In the draft rule, individual discharges of non-BCC toxic substances with no water quality criteria into non-OSRW and non-ORNW waters within and outside the Great Lakes Basin are deemed de minimis if they use less than 20 percent of the existing unused loading capacity of the waterbody, mixing zone, or other delineated area. There is no basis in the law or in the record for allowing a 20 percent loss of assimilative (loading) capacity to be considered insignificant or de minimis. Furthermore, the uncertainty associated with a Tier II criterion value could mean that the value is either over or under protective. EPA Region V has already commented that addressing this uncertainty by adjusting the significance threshold is not justified. Where in the record does IDEM support its conclusion that a 20 percent lowering of water quality can be considered insignificant? What are the names of the non-BCC toxic substances to which the 20 percent de minimis applies? Why do these substances warrant a lowering of the de minimis threshold from ten percent to 20 percent? (EC, VWI)

Response: The draft rule has been revised to reflect a de minimis threshold that is of 10%

or less (preserving 90%) of the existing available loading capacity determined at the time of the specific proposed new or increased loading of the regulated pollutant. The portion of the rule regarding application of a separate de minimis for derived Tier I criterion and Tier II values has been removed from the revised draft.

Comment: If IDEM intends that there be no de minimis as to pollutants for which there is no Tier I or Tier II criterion, then this must be explained more clearly in the rule or in the documents submitted to EPA and in any documents created that implement the rule. (See *Kentucky Waterways*, 540 F.3d at 490 (EPA not entitled to rely on a state's "unenforceable commitments" concerning methods for implementing a proposed rule).) How exactly will IDEM handle pollutants with no Tier I or II criterion? (EC, VWI)

Response: It is not possible to determine the loading capacity of the receiving waterbody for a pollutant that does not have a numerical water quality criterion. Therefore, it is not possible to determine if the discharge of a pollutant that does not have a numerical water quality criterion will cause a significant lowering of water quality using a numerical approach based on loading capacity and thus, no de minimis would apply. However, if the pollutant, without a water quality criterion is known or believed to be present in the discharge and it has a technology based effluent limit or if the pollutant is known to cause or contribute to a violation of the narrative water quality standards found in 327 IAC 2-1-6(a) or 327 IAC 2-1.5-8(b), then the pollutant will be required to be included in the antidegradation demonstration.

Comment: The draft rule language for the de minimis approach should be overhauled entirely or, at a minimum, reduce the per applicant de minimis of 20 percent unused loading capacity to ten percent, and include an adequate justification in the record. (EC, VWI)

Response: The draft rule has been revised to reflect a de minimis threshold that is of 10% or less of the existing available loading capacity determined at the time of the specific proposed new or increased loading of the regulated pollutant.

OSRW tributaries

Comment: Tributaries of OSRWs are improperly excluded from the de minimis provision for OSRWs. The term "tributary of an OSRW" is defined in the draft rule at 327 IAC 2-1.3- 2(63), but it appears that this term is not used within the substantive parts of the draft rule. It is not clear whether IDEM intends to apply the OSRW de minimis exemption in section 4(b)(1)(B) to any new or increased discharges into tributaries of OSRWs. IDEM has taken the position that tributaries to OSRWs are designated as HQWs. (IDEM Second Notice of Comment Period, LSA Document #08-764, page 5.) The draft rule appears to apply the OSRW de minimis exemption in section 4(b)(1)(B) only to discharges directly into OSRWs but not to discharges into OSRW tributaries, even where those discharges into the tributaries may result in a lowering of water quality in the downstream OSRW. Applying a de minimis exemption to OSRWs but not to their tributaries will create inconsistent and unintended results. For example, assume that a new discharge into a tributary a short distance upstream from the OSRW Lake Michigan results in a lowering of water quality in both the tributary and the lake. (IDEM contemplates that a new or increased discharge to a tributary of an OSRW has the potential to cause a significant lowering of water quality in the OSRW. See IDEM Second Notice of Comment Period, LSA Document #08-764, page 5.) If the HQW section 4(b)(1)(A) is applied to the tributary, the new loading would be allowed to take ten percent of the tributary's unused loading capacity without being deemed "significant". But the new loading of the pollutant also will flow the short distance downstream into the lake and use up loading capacity in the lake. How much of the lake's

loading capacity will be used up? It depends on several factors. But the amount of loading deemed de minimis in the tributary (ten percent of unused capacity in the tributary) can potentially compromise the unused loading capacity limit of one percent for the lake. That is, the new loading causes a significant lowering of water quality in the downstream OSRW even though the loading is deemed nonsignificant (de minimis) at the point of discharge into the tributary. Such a situation obviously must be avoided; this situation is best avoided by applying OSRW section 4(b)(1)(B) to the tributaries of OSRWs if the loading may result in a lowering of water quality in the downstream OSRW. A less-preferred alternative method (which requires more analysis and effort by IDEM) is to measure the amount of unused loading capacity in the OSRW taken up by the proposed discharge into the OSRW tributary. The following connected questions need to be answered:

(1) Why did IDEM omit tributaries to OSRWs from the de minimis provision in section 4(b)(1)(B)? Is it IDEM's intent that discharges to tributaries to OSRWs should not benefit from the de minimis exemption but rather must be subject to an antidegradation demonstration?

(2) Does IDEM intend the de minimis exemption in section 4(b)(1)(B) to apply to tributaries of OSRWs when discharges into tributaries of OSRWs may result in a lowering of water quality in the downstream OSRW? If not, why not?

(3) If IDEM applies section 4(b)(1)(A) to tributaries of OSRWs (as if they are non-OSRWs), how will IDEM ensure that a discharge using ten percent of the unused loading capacity in the tributary will not use more than one percent of the unused capacity in the downstream OSRW?

(EC, VWI)

Response: The draft rule has been revised to reflect a de minimis threshold that is of 10% or less (preserving 90%) of the existing available loading capacity of all HQWs, including Lake Michigan and its tributaries.

Comment: The following is suggested rule language to replace the draft rule language at 327 IAC 2-1.3-4(b)(1)(B):

(B) For a HQW that is an OSRW, or a tributary of an OSRW if the loading may result in a lowering of water quality in the downstream OSRW, the proposed lowering of water quality is de minimis and a Tier 2 review is not required if…

(EC, VWI)

Response*:* The draft rule has been revised to reflect a de minimis threshold that is of 10% or less (preserving 90%) of the existing available loading capacity of all HQWs, including Lake Michigan and its tributaries.

Clarification is needed on applicability of de minimis

Comment*:* Language sprinkled throughout draft rule section 4(b)(1) appears to apply the de minimis exemption to <u>all</u> new or increased loadings, whether or not associated with a new, renewed, or modified permit limit. However, sections 4(b)(1)(A)(i)(DD) and 4(b)(1)(B)(i)(DD) require that the benchmark unused loading capacity (ULC) is based on the ULC "established at the time of the permit issuance for the initial increase in the loading of a pollutant of concern." This provision suggests that the benchmark ULC would not apply where the initial increase in the loading of the pollutant did not bring a new or modified permit limit. There may be an increased loading of a pollutant that does <u>not</u> require a new or modified permit limit but which under section 1(b) still triggers the rule. By the plain language of draft rule sections

4(b)(1)(A)(i)(DD) and 4(b)(1)(B)(i)(DD), the benchmark ULC could not be calculated in this situation, and the de minimis exemption would not be available. IDEM needs to choose and clarify for the public whether the de minimis exemption will (a) be available only for changes in loading associated with a new or modified effluent limit in a permit, or (b) be available for all new or increased loadings of pollutants of concern. If the former, a new or increased loading of phosphorus that does not trigger an effluent limit would not be able to take advantage of the de minimis exemption. This would be consistent with Indiana Code 13-18-3-2(l)(1), which applies to OSRWs such as Lake Michigan, and which indicates that for these waters at least the de minimis exemption is not available for changes in loadings not associated with a new or increased permit limit.[1] If the latter, that is not consistent with Indiana Code 13-18-3-2(l)(1). How does IDEM intend to apply the de minimis exemption, if at all, to pollutants that currently lack numeric water quality criteria, such as phosphorus and nitrogen? (EC, VWI)

Response: IDEM does not intend for the de minimis exemption to be available where no new or modified permit limits are involved. It is not possible to determine the loading capacity of the receiving waterbody for a pollutant that does not have a numerical water quality criterion. Therefore, it is not possible to determine if the discharge of a pollutant that does not have a numerical water quality criterion will cause a significant lowering of water quality using a numerical approach based on loading capacity and, thus, no de minimis would apply. However, if the pollutant, without a water quality criterion is known or believed to be present in the discharge and it has a technology based effluent limit or if the pollutant is known to cause or contribute to a

[1] Indiana Code §§ 13-18-3-2(k) and (l) state as follows, with the critical language in bold:

(k) For a waterbody designated as an outstanding state resource water, the board shall provide by rule procedures that will:
(1) prevent degradation; and
(2) allow for increases and additions in pollutant loadings from an existing or new discharge if:
(A) there will be an overall improvement in water quality for the outstanding state resource water as described in this section; and
(B) the applicable requirements of 327 IAC 2-1-2(1) and 327 IAC 2-1-2(2) and 327 IAC 2-1.5-4(a) and 327 IAC 2-1.5-4(b) are met.

(l) The procedures provided by rule under subsection (k) must include the following:
(1) **A definition of significant lowering of water quality that includes a de minimis quantity of additional pollutant load**:
(A) **for which a new or increased permit limit is required**; and
(B) below which antidegradation implementation procedures do not apply.
(2) Provisions allowing the permittee to choose application of one (1) of the following for each activity undertaken by the permittee that will result in a significant lowering of water quality in the outstanding state resource water:
(A) Implementation of a water quality project in the watershed of the outstanding state resource water that will result in an overall improvement of the water quality of the outstanding state resource water.
(B) Payment of a fee, not to exceed five hundred thousand dollars ($500,000), based on the type and quantity of increased pollutant loadings, to the department for deposit in the outstanding state resource water improvement fund established under section 14 of this chapter for use as permitted under that section.
(3) Criteria for the submission and timely approval of projects described in subdivision (2)(A).
(4) A process for public input in the approval process.
(5) Use of water quality data that is less than seven (7) years old and specific to the outstanding state resource water.
(6) Criteria for using the watershed improvement fees to fund projects in the watershed that result in improvement in water quality in the outstanding state resource water.

violation of the narrative water quality standards found in 327 IAC 2-1-6(a) or 327 IAC 2-1.5-8(b), then the pollutant will be required to be included in the antidegradation demonstration.

Exemption for POTWs

Comment: There are problems with the exemptions allowed at 327 IAC 2-1.3-4(b)(2)(D) for POTWs. The draft rule would allow exemptions for new or increased loadings of pollutants simply because the pollutants are not limited in the existing NPDES permit. According to IDEM's stated position in its responses to the first comments, the lack of a current effluent limit should not exempt a pollutant loading from antidegradation review. An example of the problem is provided by the circumstances of the City of Jeffersonville Wastewater Treatment Plant, which sought a permit to relocate an outfall to another stream, thereby increasing the pollutant loading in the new receiving stream. A comment letter on NPDES permit IN0023302 requested a demonstration that the degradation of the receiving water was "justifiable on the basis of necessary economic or social factors" (the current antidegradation language that applies outside of Indiana's Great Lakes Basin), and asked whether phosphorus treatment was considered as an alternative to reduce phosphorus loading to the receiving stream. IDEM's responsiveness summary included with the issued final permit stated the following:

> Phosphorus limitations are not included in the permit. Therefore no antidegradation demonstration for phosphorus is required.

The fact that there is no phosphorus limit in the permit is certainly not an excuse for failing to determine whether a phosphorus limit should be in the permit to prevent non-de minimis and unnecessary degradation of water quality from the modified phosphorus discharges. This lack of a current limit is not one of the justifications on which an "exemption" can be validly based. However, draft rule section 4(b)(2)(D) would exempt the City of Jeffersonville's new phosphorus loading from antidegradation review, because the situation satisfies the draft rule's provisions at 327 IAC 2-1.3-4(b)(2)(D)(i), (ii), and (iii), even though a new outfall and new stream were involved (for example, draft rule item (i) there was no increase in the existing NPDES permit limits (because there were no permit limits for phosphorus), item (ii) there was no increase beyond the treatment capacity of the facility, and item (iii) there was no significant change expected in the characteristics of the wastewater discharged). Do the draft rule section 4(b)(2) exemptions apply to situations where there is no existing permit or where a new, renewed, or modified permit is required for the new or increased loading? Is IDEM exempting from antidegradation review a new or increased loading of a pollutant that lacks a current effluent limit, even when that change in loading could be reduced through treatment technology? If so, why? (EC, VWI)

Response: No, IDEM is not exempting from antidegradation review a new or increased loading of a pollutant that lacks a current effluent limit when that change in loading could be reduced through treatment technology. IDEM specifically proposes to include phosphorus as a regulated pollutant. In the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant", and the proposed definition of regulated pollutant is: "Regulated pollutant" means any:

(A) parameter:

(i) for which water quality criteria have been adopted in or developed pursuant to 327 IAC 2-1 and 327 IAC 2-1.5;

(ii) including narrative and numeric criteria;

(iii) including nutrients, specifically phosphorus and nitrogen; and

(iv) excluding biological criteria, pH, and dissolved oxygen; and

(B) other parameter that may be limited in an NPDES permit as a result of, but not limited to:

(i) best professional judgment;

(ii) new source performance standards;

(iii) best conventional pollutant control technology;

(iv) best available technology economically achievable; or

(v) best practicable control technology currently available;

for the appropriate categorical guidelines of 40 C.F.R. 400 to 40 C.F.R. 471."

Pollutants, like phosphorus, are considered to be regulated pollutants based on an applicable narrative water quality standard or a technology based effluent limits. Where a new or increased loading of that pollutant is a result of a deliberate action, the increased loading will be evaluated using the procedures found in the draft antidegradation implementation rule. The proposed definition explicitly identifies phosphorous and nitrogen as regulated pollutants.

Comment: Based on the list of examples in draft rule section 4(b)(2)(A), clause (A) presumably would not exempt new or increased loadings of pollutants just because they are not limited in the existing NPDES permit. If it would, then the criticism stated for clause (D) would apply to 4(b)(2)(A). (EC, VWI)

Response: A new or increased loading that is not covered by an existing applicable permit could trigger an antidegradation demonstration.

Comment: The exemption at 327 IAC 2-1.3-4(b)(2)(D) lacks a key prohibition on loading of BCCs from nondomestic wastes. In fact, the current interim anitidegradation rules at 327 IAC 5-2-11.3(b)(1)(C)(iii)(FF) and 327 IAC 5-2-11.7(b)(4) contain the necessary fourth condition:

(i) increase in the existing NPDES permit limits;

(ii) increase beyond the treatment capacity of the facility;

(iii) significant change expected in the characteristics of the wastewater discharged; or

(iv) increased loading of BCCs from nondomestic wastes.

IDEM obviously considered this fourth requirement to be important when the agency promulgated the interim antidegradation rules. The draft rule exemption at 327 IAC 2-1.3-4(b)(2)(D) applies to both BCCs and non-BCCs, so it is important to prohibit increased loading of BCCs from nondomestic wastes. Moreover, during the rulemaking subgroup discussions, the municipality representatives agreed that this fourth requirement was appropriate. This exemption should, in combination with other exemptions in draft rule section 4(b), result in no more than a de minimis lowering of water quality. In order to approve Indiana's rules, EPA would need to provide detailed technical analysis of the combined effect of all of these exemptions and determine whether all of the "Tier-2-review exemptions together permit significant degradation." *(Kentucky Waterways*, 540 F.3d at 492.) Why did IDEM omit the requirement of no "increased loading of BCCs from nondomestic wastes" from Exemption 4(b)(2)(D) even though that requirement is set forth in the interim rules? Is it IDEM's position that draft rule exemption 4(b)(2)(D), cumulatively with the other exemptions in section 4(b), would lower water quality within a waterbody by only a de minimis amount? (EC, VWI)

Response: After further consideration, IDEM has decided to include this language. The revised draft of the rule at 327 IAC 2-1.3-4(c)(2)(D) exempts: An increased loading of a regulated pollutant at an existing outfall discharging to a water of the state due to increasing the sewered area, connection of new sewers and users, or acceptance of trucked-in wastes, such as septage and holding tank wastes, by a POTW, provided the following are true:

(i) There is no increase in the existing NPDES permit limits.

(ii) There is no increase beyond the treatment capacity of the facility.

(iii) There is no significant change expected in the characteristics of the wastewater discharged.

(iv) There is no increased loading of BCCs from nondomestic wastes.

Comment: The following is suggested rule language to replace the draft rule language at 327 IAC 2-1.3-4(b)(2)(D):

> (D) A new or increased loading of a pollutant of concern limited in an existing NPDES permit, at an outfall discharging to a water of the state due to increasing the sewered area, connection of new sewers and users, or acceptance of trucked-in wastes, such as septage and holding tank wastes, by a POTW, provided that there is no:
>
> (i) change in the outfall or in the receiving water;
>
> (ii) increase in the existing NPDES permit limits;
>
> (iii) increase beyond the treatment capacity of the facility;
>
> (iv) significant change expected in the characteristics of the wastewater discharged; or
>
> (v) increased loading of BCCs from nondomestic wastes.

Alternatively, the exemption could just be deleted as unnecessary given a proper definition of degradation. (EC, VWI)

Response: The revised draft of the rule at 327 IAC 2-1.3-4(c)(2)(D) exempts: An increased loading of a regulated pollutant at an existing outfall discharging to a water of the state due to increasing the sewered area, connection of new sewers and users, or acceptance of trucked-in wastes, such as septage and holding tank wastes, by a POTW, provided the following are true:

(i) There is no increase in the existing NPDES permit limits.

(ii) There is no increase beyond the treatment capacity of the facility.

(iii) There is no significant change expected in the characteristics of the wastewater discharged.

(iv) There is no increased loading of BCCs from nondomestic wastes.

The short-term exemption for non-ONRW waters

Comment: At 327 IAC 2-1.3-4(b)(3)(C), it is important to recognize that this exemption would apply only where a new, renewed, or modified NPDES permit is sought for the change in loading. It would not apply to new or increased loadings not associated with a new, renewed, or modified permit (see subsection (b)(3), "The following exemptions . . . require the submission of information . . . along with the application for an NPDES permit"). The comments for section 4(a) submitted by the Environmental Coalition apply to this exemption also, and those comments are incorporated here by reference. To summarize, exemptions from antidegradation requirements for short-term and temporary lowering of water quality are consistent with the applicable federal requirements if the exemption includes: (1) a limitation on the magnitude of the impact; and (2) a procedure for responding to multiple requests for exemptions and the cumulative effects of multiple short-term impacts. Draft rule section 4(b)(3)(C) includes neither. IDEM's "short-term and temporary" exemption addresses the time of the activity and effect only, and not the magnitude of effect or any other factor listed in EPA guidance. The draft provision as written is not likely to sufficiently protect water quality from even a time-limited loading of

pollutants if the magnitude of the impact – both individually and cumulatively -- is not considered. Moreover, this exemption should, in combination with other exemptions in draft rule section 4(b), result in no more than a de minimis lowering of water quality. In order to approve Indiana's rules, EPA would need to provide detailed technical analysis of the combined effect of all of these exemptions and determine whether all of the "Tier-2-review exemptions together permit significant degradation." (*Kentucky Waterways*, 540 F.3d at 492.) Why does 327 IAC 2-1.3-4(b)(3)(C) substantially deviate from EPA guidance by omitting a limitation on the magnitude of the allowable effect as well as other applicable factors recommended by EPA? (EC, VWI)

Response: For short-term, temporary discharges, all reasonable methods for minimizing or preventing the new or increased loading must be taken. Any short-term, temporary discharge authorized in a NPDES permit will be required to meet any applicable water quality-based effluent limitations. IDEM believes that when a discharge is in compliance with the applicable water quality-based effluent limitations, there should not be any short-term or long-term detrimental effects to the receiving waterbody. The EPA guidance referenced is from Region VIII and it is just a non-binding "rule of thumb" for facilities in Region VIII.

Comment: How will IDEM handle more than one request for a short-term and temporary discharge to a waterbody? Is it IDEM's position that draft rule exemption 4(b)(3)(C), cumulatively with the other exemptions in section 4(b), would lower water quality within a waterbody by only a de minimis amount? (EC, VWI)

Response: All discharges, including short-term, temporary discharges, authorized by an NPDES permit must meet Indiana's water quality standards which are established to prevent harm to existing and designated uses.

Comment: The following is suggested rule language to replace the draft rule language at 327 IAC 2-1.3-4(b)(3)(C):

> (C) A new or increased loading of a pollutant of concern for new or increased short-term, temporary, and limited discharges is allowed if all of the following conditions are met:
>
> (i) All reasonable methods for minimizing or preventing the new or increased loading have been taken.
>
> (ii) The discharge will last less than twelve (12) months or three hundred sixty-five (365) days.
>
> (iii) A proposed new or existing discharger applies for and receives authorization from the commissioner.
>
> (iv) The discharge will result only in a short-term, temporary (not to exceed twelve (12) months) lowering of water quality.
>
> (v) The discharge, by itself and along with additional discharges to the waterbody exempted under this subsection, will not result in more than a 2.5% change in the ambient concentrations of the pollutants discharged.
>
> (vi) The lowering of water quality will not put at risk achieving applicable water quality standards during the proposed activity or have a potential for any residual long-term influences on existing uses.
>
> (vii) The discharge complies with the antidegradation standard outlined in section 3 of this rule.

(EC, VWI)

Response: IDEM appreciates the commenter submitting suggested language. However, IDEM does not believe it is appropriate to require Region VIII's suggested guidance. IDEM

believes that when a discharge is in compliance with the applicable water quality-based effluent limitations, there should not be any short-term or long-term detrimental effects to the receiving waterbody. Since any short-term, temporary discharge authorized in a NPDES permit will be required to meet any applicable water quality-based effluent limitations, water quality is sufficiently protected by the draft rule language requirements.

Exemption for non-contact cooling water

Comment: At 327 IAC 2-1.3-4(b)(3)(E), this exemption should, in combination with other exemptions in draft rule section 4(b), result in no more than a de minimis lowering of water quality. In order to approve Indiana's rules, EPA would need to provide detailed technical analysis of the combined effect of all of these exemptions and determine whether all of the "Tier-2-review exemptions together permit significant degradation." (*Kentucky Waterways*, 540 F.3d at 492.) Is it IDEM's position that draft rule exemption 4(b)(3)(E), cumulatively with the other exemptions in section 4(b), would lower water quality within a waterbody by only a de minimis amount?(EC, VWI)

Response: The draft rule has been revised to address the concerns about the exemptions by requiring some level of an antidegradation demonstration for all of the activities, including discharges of noncontact cooling water, that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit.

Comment: The draft rule language at 327 IAC 2-1.3-4(b)(3)(E) should be changed to clarify the provision because "or" is not used in the list at clause (E)(i) through clause (E)(iii). It is suggested that clause (E) read as follows:

> (E) When all reasonable methods for minimizing or preventing the new or increased loading have been taken, a new or increased discharge of noncontact cooling water that will not do <u>any of</u> the following:

(EC, VWI)

Response: Under Legislative Services Agency guidelines published in their Administrative Rules Drafting Manual, the words "any of" are not necessary to clause (E). The phrase "the following:", when followed by a list, means that all of the items listed following that phrase are included.

327 IAC 2-1.3-4(b)(4)(A)-(D): Exemptions for pollutant offsets and trading
General comments

Comment: Draft rule section 4(b)(4) sets forth four exemptions based on pollutant offsets and trading. The situations presumably covered under section 4(b)(4) are not appropriate as exemptions under the CWA and EPA guidance. Even if they were appropriate as exemptions, they should not apply to BCCs or to Lake Michigan. An "exemption" from the Tier 2 antidegradation demonstration, to be consistent with the perspectives of EPA and the courts, must be associated with one of two types of situations: (1) changes in loading result in a de minimis decrease in water quality in the receiving waterbody over the range of likely loadings; and (2) an outside procedure that sufficiently substitutes for an antidegradation demonstration is applied. The four "exemptions" in section 4(b)(4) of the draft rule are not appropriate as

exemptions from antidegradation review because IDEM has not made any showing that they meet either of the above criteria. In order to approve Indiana's rules, EPA would need to provide detailed technical analysis of the combined effect of all of these exemptions and determine whether all of the "Tier-2-review exemptions together permit significant degradation." (*Kentucky Waterways Alliance*, 540 F.3d at 492.) EPA Region 7, for example, has stated its position on exemptions as follows:

> [A]ny exemptions from the antidegradation review process must be based upon a well-founded determination that the pollution discharges permitted under such exemptions will have a truly *de minimis* impact upon the water quality of such impacted waters. (Region 7 EPA letter dated March 25, 2009 to the general counsel of the Iowa Department of Natural Resources, in response to a legislative bill setting forth exemptions to antidegradation review.)

IDEM has presented no evidence that any of the four "exemptions," as a class of loadings, will have a truly de minimis impact upon the water quality of the impacted waters. In order for a class of new or increased loadings to be exempted from antidegradation review, IDEM must show that all situations in that class likely will have a de minimis impact on water quality. That showing has not, and in most cases cannot, be made individually for the four section 4(b)(4) exemptions found in clauses (A) through (D). (EC, VWI)

Response: The draft rule has been revised to address the concerns about the exemptions by requiring some level of an antidegradation demonstration for all of the activities, including pollutant offsets and trading, that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit.

Comment: The exemption justification required in draft rule section 5, as written, does not sufficiently substitute for the antidegradation demonstration requirements in sections 6 and 7 of the draft rule for significant loadings. Compared to the antidegradation demonstration requirements, the exemption justification uses a much diluted "necessary" test to analyze alternatives to the proposed new or increased loading. (Compare section 5(c)(3) of the draft rule with the much more extensive "necessary" test set forth in section 6 of the draft rule.) Critically, the exemption justification does not require any information on, or analysis of, the social or economic importance of the actions to be exempted. Instead, the exemption justification requires only that the applicant show that the proposed discharge meets the description of the exemption as written in section 4 of the draft rule. (EC, VWI)

Response: The concept of the exemption justification has been removed from the revised draft of the rule. The revised draft requires some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit.

Comment: In attempting to justify the draft rule's section 4(b)(4) exemptions, IDEM, in its responses to the first notice comments (as posted in Second Notice of Comment Period, LSA Document #08-764), takes three positions. First, IDEM takes the position that "[i]n situations where there is a clear social or economic benefit to the environment or the affected community, the burden of making that demonstration should be very low" (IDEM Second Notice of

Comment Period, LSA Document #08-764, page 5) and "[a]ctivities listed as exemptions in the draft rule are considered to be activities that allow certain important necessary social activities to occur while protect[ing] water quality is achieved." (*Id*., page 17) This position is the basis for IDEM's application of the section 5 exemption justification, instead of the section 6 antidegradation demonstration, to at least the section 4(b)(4)(C) and 4(b)(4)(D) "exemptions." However, to properly and legally reduce the applicant's burden of demonstrating that the exempted activities are "necessary to accommodate important social or economic development," IDEM would need to do one of the following:

> (1) make a formal and public showing in the record that all of the situations covered by the exemptions are necessary to accommodate important social or economic development; or
>
> (2) make a formal and public showing in the record that all of the situations covered by the exemptions meet a subset of the factors in the section 6 demonstration, while in addition include the remaining section 6 factors in the section 5 exemption justification.

Unfortunately, IDEM has done neither. What IDEM has done is to select several generalized situations, and without any formal (or public) analysis or showing that these situations uniformly meet one or more of the factors in the section 6 antidegradation demonstration, has deemed them exempt from the section 6 demonstration. To make matters worse, the section 4(b)(4) "exemptions" are written so broadly that IDEM will not be able to generalize that all discharges falling under section 4(b)(4) will likely be necessary to accommodate important social or economic development. Without the proper showing by IDEM, EPA has no justification for approving the "exemptions" from antidegradation review. (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in 4(b)4, that result in a significant lowering of water quality.

Comment: IDEM's second position in its first notice responses to comments attempting to justify the draft rule's section 4(b)(4) exemptions states that "IDEM does not support a pollutant trading proposal that results in a significant lowering of water quality in the receiving water." (IDEM Second Notice of Comment Period, LSA Document #08-764, page 17.) In fact, the activities IDEM has included in draft rule section 4(b)(4) are most definitely pollutant trading proposals, and exemptions in section 4(b)(A), (C), and (D) in particular are not limited to be less than de minimis. Let us be clear. IDEM's response says nothing more than "IDEM does not support an exemption that results in a non-exempted lowering of water quality in the receiving water" – IDEM's statement is a tautology.[2] IDEM defines as "nonsignificant" any lowering of water quality associated with any activity that it decides to put into draft rule section 4, regardless of how much remaining loading capacity is consumed. According to the definition of "significant lowering of water quality" at 327 IAC 2-1.3-2(55), the discharge can be much greater than de minimis and still be nonsignificant if some other exemption applies.[3] Therefore, by definition, no

[2] The following definition of "tautology" is from Wikipedia: "A rhetorical tautology can also be defined as a series of statements that comprise an argument, whereby the statements are constructed in such a way that the truth of the propositions are guaranteed or that the truth of the propositions cannot be disputed by defining a term in terms of another self referentially. Consequently the statement conveys no useful information regardless of its length or complexity making it unfalsifiable. It is a way of formulating a description such that it masquerades as an explanation when the real reason for the phenomena cannot be independently derived."

[3] Draft Section 2(55) states: "'Significant lowering of water quality' means:

> (A) there is a new or increased loading of a pollutant of concern to a surface water of the state that results in an increase in the ambient concentration of the pollutant of concern and the increased loading is greater than

activity that IDEM puts into section 4 can possibly produce a "significant" lowering of water quality, including the 4(b)(4) exempted activities. The problem is that the word "significant" as used in the draft rule has no meaning independent of what IDEM decides is included in section 4. IDEM has made no public analysis or showing that these activities in section 4 actually are likely to produce a de minimis lowering of water quality or are necessary to accommodate important social or economic development. The activities in section 4(b)(4) in particular are thus untethered to any independent evidence of significance. To gain EPA approval, these "exemptions" must be tethered to detailed technical analyses in the record demonstrating that the combined effect of all of these exemptions together will result in a de minimis lowering of water quality or are necessary to accommodate important social or economic development. (*Kentucky Waterways*, 540 F.3d at 492.) IDEM has not provided this analysis. (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: IDEM's third position in its first notice responses to comments attempting to justify the draft rule's section 4(b)(4) exemptions, including the section 4(b)(4)(C) tradeoff of water and air pollution, states that "[b]oth of the discharge situations identified in the comment require the discharger to provide an exemption justification to IDEM that is sufficient to show that the new or increased discharge will result in an overall improvement to the environment." (IDEM Second Notice of Comment Period, LSA Document #08-764, page 16.) The antidegradation policy, however, is not concerned with general "environmental improvement." Rather, it is concerned with degradation of water quality. Thus, a showing that a new or increased discharge will result in an overall improvement to "the environment" does not imply that the discharge will produce a de minimis lowering of water quality or that it is necessary to accommodate important social or economic development, and cannot support EPA approval. (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in 4(b)(4), that result in a significant lowering of water quality.

Comment: It is important to recognize that the draft rule would allow the section 4(b)(4) exemptions only where a new, renewed, or modified NPDES permit is sought for the change in loading, because the exemption justification in section 5(a)(2) is so limited. The exemptions would not apply to a change in loading not associated with a new, renewed, or modified permit. (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in 4(b)(4), that result in a significant lowering of water quality.

Specific comments on exemption at 327 IAC 2-1.3-4(b)(4)(A):
Exemption for watershed offset

Comment: The exemption at 327 IAC 2-1.3-4(b)(4)(A) is not appropriate as an exemption from antidegradation review because although the exemption requires a de minimis

---

a de minimis lowering of water quality; and
(B) none of the provisions of section 4 of this rule applies."
A lowering of water quality is nonsignificant if either (A) or (B) is not true.

loading of the pollutant over a HUC-10 watershed, it neither requires nor can ensure with any degree of certainty a de minimis lowering of water quality in the receiving waterbody. This exemption could be particularly detrimental to localized water quality in Lake Michigan, and, if not deleted from the rule, it should be substantially modified and should not apply to Lake Michigan or BCCs. (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in 4(b)(4), that result in a significant lowering of water quality.

Comment: Exemption 4(b)(4)(A) allows, without antidegradation review, a significant increase in loading of a pollutant into a lake or stream segment as long as there is a corresponding decrease in the net loading of the pollutant somewhere within the entire HUC-10 watershed. This is presumably accomplished by reducing the loading of the same pollutant in a stream segment or lake segment different from the receiving segment. For this scenario to likely produce a truly de minimis impact upon the water quality of the impacted water, one must assume that biological impacts and risks resulting from a significant increase in loading into a particular segment will be entirely offset by a decrease in loading in other segments within the same HUC-10 watershed. And because IDEM is proposing this scenario as an exemption from an antidegradation demonstration, this assumption must hold over the range of discharges and circumstances likely encountered. IDEM cannot assure that this assumption will hold for all discharges *a priori*, however, due to differences in localized communities of aquatic organisms, differences in absorption and reactions of pollutants across different locations of the same watershed, and incomplete mixing between different segments of the Indiana portion of Lake Michigan. For example, for a pollutant that is locally sequestered by plants and animals soon after discharge, reducing loadings in one segment of the stream may not offset the local impacts of loadings in other segments. Because different locations in the watershed may react differently to the discharge of a pollutant, the locations are not fungible, and IDEM cannot generalize that all discharges falling under the exemption at 327 IAC 2-1.3-4(b)(4)(A) will likely be non-significant in impact. Does IDEM have any evidence or analysis that, in general for the range of likely circumstances covered under this exemption, water quality impacts resulting from a significant increase in loading into a particular stream or lake segment will be entirely offset by a decrease in loading from sources in other stream or lake segments in the same watershed? If so, where can this evidence or analysis be obtained by the public? (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: In particular, for Lake Michigan, the exemption at 327 IAC 2-1.3-4(b)(4)(A) would allow a significant reduction in water quality in one area of the Indiana portion of the lake in exchange for increased quality in another area of the Indiana portion of the lake (or possibly even in a tributary of the lake), even if those two areas do not intermix on any reasonable timescale, without any consideration of the potentially important social or economic dimensions of such a tradeoff between locations. This exemption, if not deleted from the rule, should not apply to Lake Michigan. How will IDEM consider the social and economic dimensions of allowing a significant reduction in water quality in one area of Lake Michigan in exchange for increased quality in another area of the lake (or possibly even in a tributary of the lake), even if those two areas do not intermix on any reasonable timescale, particularly given that the exemption justification does not require such consideration? (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation

demonstration for all of the activities, including those formerly listed in 4(b)(4), that result in a significant lowering of water quality.

Comment: Attempting to offset a new or increased loading of a BCC with a decrease in the loading of the BCC somewhere else in the watershed (or in some other area of Lake Michigan) is highly risky due to the likelihood of creating hotspots of BCC pollution. (See U.S. EPA, Water Quality Trading Assessment Handbook (EPA 841-B-04-001, November 2004), chapter II, page 6.) This exemption, if not deleted from the rule, should not apply to BCCs. Why has IDEM applied draft rule exemption 4(b)(4)(A) to BCCs, especially given that the analogous exemptions in the current interim rules do not apply to BCCs? (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: The language in draft rule section 5(c) of the exemption justification, which provides the substantive analysis that IDEM plans to apply to the section 4(b)(4) exemptions, highlights the inappropriateness of handling an intra-watershed trade as an exemption. The exemption justification requires that the applicant show only that the proposed trade will "minimize the proposed lowering of water quality," but does not require that the proposed trade will actually increase the existing water quality in the watershed, which is the requirement and promise in section 4(b)(4)(A). (Moreover, minimization of any quantity can only be done with respect to some constraint, such as cost, but the draft rule fails to disclose what those constraints will be. The proposed lowering of water quality is always minimized by not discharging.) The exemption justification should require a showing that the tradeoffs across locations will improve the water quality in the receiving waterbody (especially for OSRWs -- see also IC 13-18-3-2(m)(2), requiring offsets to significant loadings into OSRWs with water quality improvements "that will result in an overall improvement of the water quality of *the [OSRW]*" (emphasis added)). Where in the record has IDEM provided a "well-founded determination" that any changes in water quality under this exemption will be de minimis, especially considering that the exemption justification only requires the applicant to show that the proposed trade will "minimize the proposed lowering of water quality," rather than requiring that the applicant show that the proposed trade will actually maintain or improve existing water quality? (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: Application of pollution trading at the watershed scale must be done with care. (See U.S. EPA, Water Quality Trading Toolkit for Permit Writers, pages 12-13: "In general, the geographic scope of a trade should be no larger than necessary to encompass the universe of sources that contribute to a specific water quality problem that is to be addressed through trading."; U.S. EPA Water Quality Trading Assessment Handbook, pages 16-17: "some potential trades that could result in a general water quality improvement in a broad area may also result in acute or chronic localized impacts"; and *Id*., page 6: "In addition to ensuring that overall pollutant reduction impacts are equivalent, trades must not create locally high loadings of pollutants or 'hotspots'.") Yet, draft rule exemption 4(b)(4)(A) does not include any provision that would prevent the most blatant abuses of the trading concept from occurring. (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: The draft rule exemption at 327 IAC 2-1.3- 4(b)(4)(A) is a deviation from the

policy reflected in IDEM's interim antidegradation rules. The analogous exemptions in the interim rules 327 IAC 5-2-11.3(b)(1)(C)(iii)(DD) and 327 IAC 5-2-11.7(c)(2)(A), unlike draft rule exemption 4(b)(4)(A), do not apply to BCCs. (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: The following is suggested rule language to replace the draft rule language at 327 IAC 2-1.3-4(b)(4)(A):

> (A) A change in loading of a pollutant of concern that is not a BCC to a waterbody that is not an OSRW:
>
> > (i) where there is a voluntary, simultaneous, enforceable decrease in the actual loading of the pollutant of concern from sources contributing to the same ten (10) digit watershed; and
> > (ii) with the result that there is a net decrease in the loading of the pollutant of concern to the same ten (10) digit watershed.; and
> > (iii) where the applicant demonstrates that the increase in loading, combined with the simultaneous decrease in the loading of the pollutant from the other sources in the watershed, will not cause a decline in the water quality of the receiving waterbody.

(EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Specific comments on exemption at 327 IAC 2-1.3-4(b)(4)(B):
Exemption for cross-pollutant trading

Comment: The exemption at 327 IAC 2-1.3-4(b)(4)(B) is not appropriate as an exemption. The exemption attempts to ensure that any situation covered by the exemption will result in a nonsignificant impact by requiring that the new or increased loading of pollutant X be necessary to reduce a more bioaccumulative and more toxic pollutant Y. EPA has issued extensive guidance on pollutant trading schemes and recommends that such schemes be applied with much caution.[1] Although IDEM may have specific applications of this exemption in mind, IDEM errs by attempting to set forth a generalized pollutant trading scheme without any evidence that the scheme will produce nonsignificant impacts across a range of pollutants, discharges, and circumstances. IDEM's presumption that an improvement in water quality will occur if the "impact from the new or increased loading of the pollutant of concern" is less bioaccumulative and less toxic than the reduced pollutant or pollutant parameter is not warranted. It is entirely unclear how an "impact" of a loading can be more or less bioaccumulative. It is possible that IDEM is attempting to incorporate the magnitude of the changes in loading of each pollutant into

[1] EPA accepts the pollutant trading concept as a tool for maintaining or improving water quality, but only for some pollutants and some situations. See U.S. EPA, Water Quality Trading Assessment Handbook (November 2004). EPA does not support trading of bioaccumulative toxics. See U.S. EPA, Water Quality Trading Toolkit for Permit Writers, Office of Wastewater Management Water Permits Division, (August 2007) EPA 833-R-07-004, page 10 ("Not all pollutants are necessarily suitable for trading. . . . EPA's Trading Policy supports trading for TN, TP, and sediment and indicates that other pollutants may be considered for trading on a case-by-case basis. EPA does not support trading of persistent bioaccumulative toxics.").

this trading scheme. If so, this should be made clear in the rule language. If "impact" refers to the pollutant itself, then clearly a large increase in the load of a less bioaccumulative, less toxic pollutant may not be offset by a very small decrease of a more bioaccumulative, more toxic pollutant. This provision then would need to account for overall mass. Does IDEM have any evidence that, in general for the range of likely circumstances falling under this exemption, water quality impacts resulting from a significant increase in loading of one pollutant will be entirely offset by a decrease in loading from another pollutant simply because the increased pollutant is less bioaccumulative and toxic? If so, please disclose that evidence to the public? Where in the record has IDEM provided a "well-founded determination" that any changes in water quality under this exemption will be de minimis? (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: Bioaccumulativity and toxicity are not the only factors of concern regarding the exemption at 327 IAC 2-1.3-4(b)(4)(B). The persistence of a pollutant in the water column or sediments is often an important factor in water quality trading yet is not considered in this exemption. As well, the question of whether the pollutant has synergistic effects with other pollutants needs consideration. Why did IDEM omit loading mass, pollutant persistence, and synergistic effects as factors in item (iii)? (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: Even if IDEM incorporates loading mass and pollutant persistence to the draft rule exemption 4(b)(4)(B), the exemption is still inappropriate because no general presumption of the proper pollutant trade can be specified *a priori* in the rule for all waterbodies, pollutants, and situations, as IDEM attempts to do in this exemption. The problems with exemption 4(b)(4)(B) are especially troublesome because the exemption applies to all OSRWs, all HQWs in the Great Lakes Basin, and all loadings of BCCs. Exemption 4(b)(4)(B) should never be applied to BCCs or OSRWs. EPA recommends against pollutant trading for BCCs, and, in fact, the analogous exemptions in the current interim rules do not apply to BCCs (see 327 IAC 5-2-11.3(b)(1)(C)(iii)(JJ) and 327 IAC 5-2-11.7(c)(2)(B)). Moreover, because of the relative high uncertainty in the outcome of pollutant trading, the application of this scheme in OSRWs is particularly risky. In particular, increasing one bioaccumulative or toxic pollutant in one segment of Lake Michigan in exchange for a decrease in another bioaccumulative or toxic pollutant in another segment of Lake Michigan is a complex trading scheme and should be analyzed along with the social and economic dimensions of the trade. Why should the exemption apply to BCCs, especially given that the comparable exemptions in the interim rules do not apply to BCCs? Why should the exemption apply to OSRWs? (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: In sum, cross-pollutant trading situations are most appropriately handled in a Tier 2 antidegradation demonstration where the social benefit of the trade can be weighed against the social and economic costs. If, indeed, a cross-pollutant trade results in a less bioaccumulative, less toxic, less persistent, and less synergistic discharge, then it will likely pass a Tier 2 antidegradation review without much trouble. However, a blanket exemption is not appropriate because it fails to account for the range pollutants, discharges, and circumstances that may be

presented. Therefore, the Environmental Coalition offers no suggested language to replace 327 IAC 2-1.3-4(b)(4)(B) because the exemption should be deleted from the antidegradation draft rule. (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Specific comments on exemption at 327 IAC 2-1.3-4(b)(4)(C):
Exemption for cross-pollutant and cross-media trading

Comment: The exemption at 327 IAC 2-1.3-4(b)(4)(C) also is not appropriate as an exemption from antidegradation review. It exhibits all of the shortcomings of the draft rule exemptions at 327 IAC 2-1.3-4(b)(4)(A) and 327 IAC 2-1.3-4(b)(4)(B) in that the spatial scale is too large, it applies to BCCs and OSRWs, and it tries to shortcut the analysis necessary for complex pollutant trading schemes. Exemption 4(b)(4)(C) has two additional problems. First, the exemption sets forth a cross-media pollutant trading scheme. EPA Region 5, in its review of a prior IDEM draft antidegradation rule, rejected cross-media transfers of pollutants as not appropriate for an exemption from an antidegradation demonstration. Second, exemption 4(b)(4)(C) entirely abandons EPA's principle that any exemptions from the antidegradation review process must be based upon a well-founded determination that the pollution discharges permitted under such exemptions will have a truly de minimis impact upon the water quality of the impacted waters. (Region 7 EPA letter dated March 25, 2009 to the general counsel of the Iowa Department of Natural Resources, in response to a legislative bill setting forth exemptions to antidegradation review.) Exemption 4(b)(4)(C) requires only that there be an "environmental improvement," meaning that IDEM considers water pollution and air pollution to be fungible and able to be traded as long as the generalized "environment" is improved. There is no specific application of this cross-media trading scheme that would be appropriate as an antidegradation exemption under the antidegradation rule because by definition the application of the exemption would consistently allow significant impacts to water quality. How is this exemption from an antidegradation demonstration consistent with the CWA and EPA guidance, given that application of the exemption will allow significant impacts to water quality? Where in the record has IDEM provided a "well-founded determination" that any changes in water quality under this exemption will be de minimis? Is it IDEM's position that the situations described in section 4(b)(4)(C), as a class, are necessary to accommodate important social or economic development? Why should the exemption apply to BCCs and OSRWs? (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: The inappropriateness of the exemption at 327 IAC 2-1.3-4(b)(4)(C) does not mean that allowing significant reductions in water quality for the purpose of reducing exposure to "hazardous air pollutants or other air pollutants that are subject to state or federal air quality standards" (see draft rule section 4(b)(4)(C)(iii)(BB)) is never an important social and economic activity. But IDEM's over-simplified presumption that <u>all</u> such reductions in exposure are necessary to accommodate important social or economic development is to date unanalyzed and unjustified. Moreover, the exemption is written so broadly – significant water quality degradation will be allowed to reduce exposure to any "air pollutants that are subject to state or federal air quality standards" – that IDEM cannot show that all such reductions would pass the importance

test. Nor can IDEM label the cross-media pollutant trade as a decision about "environmental improvement" and bypass the importance test altogether. Finally, the draft rule section 5 exemption justification contains no analysis of social or economic importance and so cannot be used to analyze such importance on a case by case basis. How will the application of the section 5 exemption justification show on a case by case basis that the situations described in section 4(b)(4)(C) are necessary to accommodate important social or economic development? (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: The tradeoff between air and water pollution must be evaluated in the context of a Tier 2 antidegradation demonstration that the lowering of water quality is necessary to accommodate this important public health objective. Exempting this tradeoff at exemption 4(b)(4)(C) from an antidegradation demonstration with its necessary and importance tests is not consistent with the federal requirements. To properly and legally reduce the applicant's burden of demonstrating that lowering water quality in exchange for a reduction in a particular air pollutant is "necessary to accommodate important social or economic development," IDEM would need to: (1) make a formal and public showing that this exchange is necessary to accommodate important social or economic development; or (2) make a formal and public showing that this exchange meets a subset of the factors in the draft rule's section 6 demonstration, and include the remaining section 6 factors in the section 5 exemption justification. Has IDEM made a formal and public analysis and showing that all of the situations covered by section 4(b)(4)(C), as a class, are necessary to accommodate important social or economic development? If so, where can the public obtain a copy of this analysis and showing? Has IDEM made a formal and public analysis and showing that all of the situations covered by section 4(b)(4)(C), as a class, meet a subset of the factors in the section 6 demonstration, and, in addition, has IDEM included the remaining section 6 factors in the section 5 exemption justification? If so, where can the public obtain a copy of this analysis and showing? (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: The Environmental Coalition offers no suggested language to replace 327 IAC 2-1.3-4(b)(4)(C) because the exemption should be deleted from the antidegradation draft rule. (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Specific comments on exemption at 327 IAC 2-1.3-4(b)(4)(D):
Exemption for socio-economic importance of public health concerns

Comment: The exemption at 327 IAC 2-1.3-4(b)(4)(D) also is not appropriate because it, like draft rule exemption 4(b)(4)(C), abandons EPA's principle that any exemptions from the antidegradation review process must be based upon a well-founded determination that the pollution discharges permitted under such exemptions will have a truly de minimis impact upon the water quality of the impacted waters. Exemption 4(b)(4)(D) trades a significant lowering of water quality for improvement in public health, but this trade does not result in a de minimis impact to water quality. Improving public health may be an important social and economic

development, but this analysis is properly made within the context of a Tier 2 antidegradation demonstration. Similar to the discussion for draft rule exemption 4(b)(4)(C), this section 4(b)(4)(D) "exemption" is not a proper vehicle for situations that are deemed likely to pass the Tier 2 "importance" test but that still produce significant lowering of water quality, where there has been no showing of such importance (such as would be required for a general permit) and the exemption justification does not require any information on social or economic importance of the decrease in water quality. To properly and legally reduce the applicant's burden of demonstrating that lowering water quality in a particular scenario is "necessary to accommodate important social or economic development," IDEM would need to: (1) make a formal and public showing that this exchange is necessary to accommodate important social or economic development; or (2) make a formal and public showing that this exchange meets a subset of the factors in the section 6 demonstration, and include the remaining section 6 factors in the section 5 exemption justification. Where in the record has IDEM provided a "well-founded determination" that any changes in water quality under this exemption will be de minimis? Is it IDEM's position that the situations described in section 4(b)(4)(D), as a class, are necessary to accommodate important social or economic development? Has IDEM made a formal and public analysis and showing that all of the situations covered by section 4(b)(4)(D), as a class, are necessary to accommodate important social or economic development? If so, where can the public obtain a copy of this analysis and showing? Has IDEM made a formal and public analysis and showing that all of the situations covered by section 4(b)(4)(D), as a class, meet a subset of the factors in the section 6 demonstration, and, in addition, has IDEM included the remaining section 6 factors in the section 5 exemption justification? If so, where can the public obtain a copy of this analysis and showing? How will the application of the section 5 exemption justification show on a case by case basis that the situations described in section 4(b)(4)(D) are necessary to accommodate important social or economic development? How is this exemption from an antidegradation demonstration consistent with the CWA and EPA guidance, given that application of the exemption will allow significant impacts to water quality? Why should the exemption apply to BCCs and OSRWs? (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

Comment: The Environmental Coalition offers no suggested language to replace 327 IAC 2-1.3-4(b)(4)(D) because the exemption should be deleted from the antidegradation draft rule. (EC, VWI)

Response: The revised draft of the rule requires some level of an antidegradation demonstration for all of the activities, including those formerly listed in section 4(b)(4), that result in a significant lowering of water quality.

327 IAC 2-1.3-5 Exemption justification

Comment: None of the so-called "exemptions" in 327 IAC 2-1.3-4(b)(4), to which the section 5 exemption justification procedure applies, are appropriate as exemptions from antidegradation review, even with a section 5 exemption justification. It is not clear whether IDEM's position is that the section 4(b)(4) exemptions, plus the section 5 exemption justification, are functionally equivalent to an antidegradation demonstration. Regardless, the exemption justification requirement is not substantially equivalent to the necessary and importance tests of the antidegradation demonstration. This is clear when section 5 is compared

to section 6. First, the section 5 exemption justification, unlike the antidegradation demonstration in section 6, applies only to new or increased loadings associated with an NPDES permit. Antidegradation applies to any action in Indiana that is required to comply with WQS (activities conducted pursuant to CWA Section 404 and Section 401, plus other discharges), not just actions covered by NPDES permits. (See 40 C.F.R. 131.12(a); 63 Fed. Reg. 36742, 36780 (1998).) Thus, the draft rule section 4(b)(4) exemptions are limited to situations where a new, renewed, or modified permit is associated with the new or increased loading, a subset of the situations covered by the rule. Second, compared to the antidegradation demonstration requirements, the exemption justification uses a much diluted "necessary" test to analyze alternatives to the proposed new or increased loading. (Compare section 5(c)(3) of the draft rule with the much more extensive "necessary" test set forth in sections 6(b)(12) and (13) of the draft rule.) Third, the exemption justification does not require any information on, or analysis of, the social or economic importance of the actions to be exempted. Furthermore, the public notice provisions in draft rule section 5(b) require a public meeting on an exemption justification if the proposed discharge is to an OSRW. Discharges to tributaries of OSRWs do not require a public meeting, however, even though discharges into such tributaries may have a significant impact on the water quality of the OSRW. The term "tributary of an OSRW" is defined in draft rule section 2(63), but it appears that this term is not used within the substantive parts of the draft rule. Draft rule section 5(b) should say that a public meeting is required for any proposed discharge to an OSRW or to a tributary of an OSRW. Finally, it is important to recognize that the draft rule would allow the section 4(b)(4) exemptions only where a new, renewed, or modified NPDES permit is sought for the change in loading, because the exemption justification in draft rule section 5(a)(2) is so limited. The exemptions would not apply to a change in loading not associated with a new, renewed, or modified permit. Where in the record has IDEM demonstrated that the exemptions in draft rule section 4(b)(4), plus the section 5 exemption justification, are functionally equivalent to an antidegradation demonstration? Why did IDEM omit tributaries to OSRWs from the requirement of a public meeting even though discharges into tributaries of OSRWs can significantly reduce the water quality in OSRWs? (EC, VWI)

Response: The concept of the exemption justification has been removed from the revised draft of the rule. The revised draft requires some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit.

Comment: The following is suggested rule language to replace the draft rule language at 327 IAC 2-1.3-5(b):

(b) Upon receipt of an exemption justification, the commissioner shall provide notice and request comment according to 327 IAC 5-2-11.2. The commissioner shall hold a public meeting on the exemption justification in accordance with 327 IAC 5-2-11.2 if the proposed discharge is to: (1) an OSRW; or

(2) a tributary of an OSRW.

(EC, VWI)

Response: The concept of the exemption justification has been removed from the revised draft of the rule.

327 IAC 2-1.3-6 Antidegradation demonstration applicability

Comment: At 327 IAC 2-1.3-6(a) regarding antidegradation demonstration applicability, IDEM inexplicably uses language that deviates from both the federal and Indiana antidegradation standard. Why did IDEM not use the standard language "necessary to accommodate important social or economic development in the area of the discharge" in this provision? (EC, VWI)

Response: IDEM believes it is valuable for an applicant to show that its proposed discharge is necessary – that there is not a reasonable non-discharging alternative and that the necessary discharge is socially/economically important.

Comment: The following is suggested rule language to replace the draft rule language at 327 IAC 2-1.3-6(a):

(a) Any existing or proposed discharger seeking a new or increased discharge that constitutes a significant lowering of water quality that is not exempt under section 4 of this rule, must submit for consideration by the commissioner an antidegradation demonstration application consistent with the requirements in this section that justifies that the proposed new or increased discharge is necessary to accommodate important social or economic development in the area of the discharge. (EC, VWI)

Response: IDEM appreciates the commenter submitting suggested language, but IDEM believes it is valuable for an applicant to show that its proposed discharge is necessary – that there is not a reasonable non-discharging alternative and that the necessary discharge is socially/economically important.

Antidegradation demonstration factors

Comment: Regarding the antidegradation demonstration factors at 327 IAC 2-1.3-6(b), the federal Tier 2 antidegradation protections prohibit the lowering of water quality unless it is "necessary to accommodate important social or economic development." (40 CFR 131.12(a)(2)) EPA guidance makes clear that this includes two important questions:

(1) Is the lowering of water quality "necessary," i.e. has the applicant adequately documented that non-degrading or less-degrading alternatives are not available?

(2) Will the regulated activity lead to "important" social and economic development, i.e. has the applicant adequately documented that the positive socioeconomic impact of the regulated activity, on balance, outweighs any negative socioeconomic impacts associated with the lowering of water quality?

In applying EPA's guidance, the initial analysis must be whether the proposed discharge is "necessary". Satisfying this inquiry demands an analysis of alternatives to the proposed discharge. The "necessary" analysis questions whether it is possible to minimize, mitigate, or avoid the proposed discharge or its impacts to water quality through technology or other means. EPA has stated that "[g]iven the variety of engineering approaches to pollution control and the emerging importance of pollution prevention, the finding of necessity is among the most important and useful aspects of an antidegradation program and potentially an extremely useful tool in the context of watershed planning." (63 Fed. Reg. 36742, 36784.) Second, the activity that the applicant claims requires a new or increased discharge must accommodate important social or economic development in the area of the receiving waterbody. The demonstration of "importance" focuses on the socio-economic benefits of the proposed activity counterbalanced against the socioeconomic costs of the proposal and the projected environmental effects. This balancing concept is key. Socioeconomic development cannot be said to be "important" if the

potential economic and social benefits of the project are outweighed by the overall costs to society of allowing additional pollution to the water. (See U.S. EPA Region VIII Guidance: Antidegradation Implementation (August 1993), page 21 (stating that the inquiry should "weigh the applicant's demonstration against counterbalancing socioeconomic costs associated with the proposed activity, such as projected negative socio-economic effects on the community and the projected environmental effects"). Accordingly, if the negative environmental, social, and economic impacts of the action outweigh the positive environmental, social, and economic impacts, then the antidegradation application must be denied. (EC, VWI)

Response: IDEM appreciates this analysis of the "necessary to accommodate important social or economic development" component of the antidegradation policy.

Comment: EPA views the antidegradation demonstration as a stringent test, a test certainly not met by every applicant:

> This provision is intended to provide relief only in a few extraordinary circumstances where the economic and social need for the activity clearly outweighs the benefit of maintaining water quality above that required for 'fishable/swimmable' water, and both cannot be achieved. *The burden of demonstration on the individual proposing such activity will be very high*. (U.S. EPA Water Quality Standards Handbook, Second Edition (August 1994), Pages 4-7 (emphasis added))

The most apparent result of a "significant lowering of water quality" will be a reduction in assimilative (loading) capacity for one or more pollutants of concern. This impact on assimilative capacity may not cause readily discernable harm to aquatic biota, assuming that water quality criteria are not violated, and the applicant may be tempted to conclude that there are no negative impacts. The impact to assimilative capacity may, however, harm the social and economic value that the community and industry places on maintaining high assimilative capacity. This harm must be balanced against the social and economic benefits of a proposed activity to determine whether the development is "important." (EC, VWI)

Response: IDEM agrees that there are numerous factors that must be accounted for before determining whether a significant lowering will be allowed.

Comment: As noted in the Washington State procedures:

> Particularly for parameters such as dissolved oxygen, bacterial pollutants, and common metals, the loss of available assimilative capacity may mean that future entities and expansions will be held to higher and more expensive treatment requirements. The less each individual activity uses of the assimilative capacity, the better the potential for cost-effective future development will be. Discussing the relative impact on the remaining assimilative capacity addresses the relative impact of the activity on the costs and opportunities for future growth. (Washington State Supplementary Guidance Implementing the Tier II Antidegradation Rules (July 18, 2005) WAC 173-201A-320, page 15.)

The Washington State rules balance a number of factors to determine whether or not the proposed lowering of water quality is in the "overriding public interest." (See WAC 173-201A-320(4)(a)) The Connecticut implementation procedures similarly require applicants to balance "overriding" economic or social factors against the loss or reduction of environmental quality. (See Connecticut Anti-degradation Implementation Policy, Appendix E(IV)(2)) Iowa's draft implementation procedures follow a similar balancing approach, including an assessment of associated environmental related benefits or costs such as:

> Promoting/impacting fishing, recreation, tourism or other economic benefits for the Community; and

Reserving assimilative capacity for future industry and development. (See Iowa Antidegradation Implementation Procedure, Section 3.3 (available at http://www.iowadnr.gov/water/standards/antidegradation.html))

(EC, VWI)

Response: As part of this rulemaking IDEM has reviewed numerous other states' antidegradation rules. The draft rule proposes a similar balancing approach when considering an assessment of economic and environmental factors.

Comment: The antidegradation draft rule must assure that a proposed lowering of water quality will result in "important" social and economic development, but the draft rule language omits three factors that need to be included to ensure that the impacts of reducing assimilative capacity are sufficiently evaluated. The draft rule language should clarify that quantitative and qualitative data are appropriate and can be considered by IDEM in determining whether social and economic development is "important." The following is suggested rule language for inclusion in the draft rule at 327 IAC 2-1.3-6(b)(15):

(15) The evaluation of the anticipated impact of the proposed lowering of water quality, using quantitative and qualitative data as appropriate, on economic and social factors, including the following:

****

( ) The value to residents in the area of the activity accommodated by the proposed reduction in loading capacity.

( ) The value to the community of reserving additional loading capacity for future industry, development, tourism, or environmental protection. (Washington State Supplementary Guidance Implementing the Tier II Antidegradation Rules (July 18, 2005) WAC 173-201A-320, page 15.)

( ) The potential for reduced effectiveness of government or privately sponsored conservation projects that have specifically targeted improved water quality or enhanced recreational opportunities on the proposed receiving waterbody. (This factor is included in the current interim antidegradation rule at 327 IAC 5-2-11.3(b)(3)(C)(vi))

(EC, VWI)

Response: IDEM believes that these concepts are captured in the requirement for an analysis of the effluent reduction benefits and water quality benefits associated with the degradation mitigation techniques or alternatives.

327 IAC 2-1.3-6(b)(15)(O): Provision in importance test

Comment: At 327 IAC 2-1.3-6(b)(15)(O), as with 327 IAC 2-1.3-6(a), the draft rule language is inexplicably modified from the language of the antidegradation standard. As modified, this provision in clause (O) is not clear. The positive and negative social or economic development impacts identified and reviewed under subdivision 15(O) are not necessary to accommodate development, but rather they are evidence of the importance or lack of importance of the proposed action. Also, this provision should not be limited to "permit applicants." In contrast, section 6(a) states that the demonstration applies to any discharger "seeking a new or increased discharge that constitutes a significant lowering of water quality" without reference to permits. Why did IDEM not use the standard language "necessary to accommodate important social or economic development in the area of the discharge" in this provision? Why should the antidegradation review of the factors in subdivision (15) apply only to "permit applicants"?

Doesn't antidegradation review apply to a new or increased discharge regardless of whether a new or modified permit limit is sought? (EC, VWI)

Response: The draft rule language reflects the statutory language at IC 13-18-3-2(s).

Comment: The following is suggested rule language for replacement of the draft rule language at 327 IAC 2-1.3-6(b)(15)(O):

> (O) Demonstration by the discharger seeking a new or increased discharge that, given the positive and negative social and economic impacts identified and reviewed under clauses (A) through (N), allowing the lowering of water quality is necessary to accommodate important economic or social development in the area.

(EC, VWI)

Response: IDEM appreciates the commenter submitting suggested language, but the draft rule language reflects the statutory language at IC 13-18-3-2(s). The revised draft of the rule proposes:

> "(O) Demonstration by the applicant that the factors identified and reviewed under clauses (A) through (N) are necessary to accommodate important social or economic development despite the proposed significant lowering of water quality."

IDEM believes this change to allow application of this provision beyond permits does not contradict the intent of the statute.

327 IAC 2-1.3-6(c)(1): Substantial weight requirement

Comment: At 327 IAC 2-1.3-6(c)(1), the draft rule requires that "substantial weight" be given to "any applicable determinations by governmental entities." If interpreted to require IDEM to give special deference to determinations by governmental bodies without CWA authority of whether a lowering of water quality is "necessary" or "important," this provision improperly and illegally abdicates and delegates IDEM's authority for a decision required under the CWA. IDEM's stated position on this provision, and its interpretation of Public Law 78-2009, is as follows:

> The draft rule has been developed mindful of the federal requirements and other guidance. Public Law 78-2009 requires IDEM to give substantial weight to determinations by governmental entities concerning whether a proposed discharge is necessary to accommodate important economic or social development in the area in which the waters are located. However, the final decision about the project's social and economic benefits to the community resides with the commissioner. (IDEM Second Notice of Comment Period, LSA Document #08-764, page 20.)

IDEM's position on this provision highlights and exacerbates the provision's illegality. Contrary to IDEM's interpretation, it is precisely the decision concerning "whether a proposed discharge is necessary to accommodate important economic or social development in the area in which the waters are located" that must be reserved exclusively to the IDEM commissioner. Decisions about the project's individual social and economic benefits, on the other hand – such as how many new jobs will be produced – may be appropriate for some level of deference if the "governmental entity" has jurisdiction and particular expertise in that subject area. Passage of Public Law 78-2009 does not shield draft rule section 6(c)(1) from illegality or disapproval by EPA. (EC, VWI)

Response: It is a state statutory requirement that the Commissioner give substantial weight to any applicable determination by a governmental entity. IDEM does not agree that the CWA or EPA rules require that the decisions regarding the social and economic necessity of a

discharge be made exclusively by IDEM. However, the Commissioner of IDEM retains all of his authority to make a final permit decision on a new or increased discharge.

Comment: A detailed look at 327 IAC 2-1.3-6(c)(1) highlights its problems. The phrase "substantial weight" in law and court decisions reflects two concepts: first, substantial deference is given to a decision maker, and second, the decision maker receiving the deference is an expert on the subject of the decision. Surely IDEM could not legally defer to another entity's determination that the permit applicant will meet the best available technology of pollution control without abdicating IDEM's delegated authority under the CWA. IDEM is clearly the expert on the "necessary" test of alternatives and must exercise its CWA authority in this subject area to satisfy federal requirements. Similarly, IDEM could not give substantial weight to another agency's determination that the proposed polluting activity is socially or economically "important" without improperly abdicating its delegated authority under the CWA. For example, any "determination" by another governmental entity that an increase in jobs and in tax base makes a polluting activity "important" is not applicable to IDEM's Tier 2 or Tier 2.9 determination, which must weigh benefits against the costs of lowering water quality. Another entity's determination will be unlikely to consider, benefits and costs resulting from the use of assimilative (loading) capacity. In other words, no other governmental entity (other than EPA) has the expertise or the CWA jurisdiction to make a determination of the "importance" of lowering water quality. The only decisions of other governmental entities that reasonably could be given deference in the antidegradation demonstration are those related to the individual factors in draft rule section 6(b)(15)(A) through (N). For example, IDEM could defer to an economic development body on how many jobs would be created or by how much the tax base would increase if a discharger were to change capacity or processes. IDEM would then take this information and determine whether this increase in jobs or tax base makes the proposed activity important socially or economically. If this is the type and scope of deference that IDEM is attempting to incorporate in draft rule section 6(c)(1), then it has failed. Finally, the provision at 327 IAC 2-1.3-6(c)(1) would compromise IDEM's ability to adequately weigh relevant public comment in evaluating a proposed action and render moot the federal requirement for "full satisfaction of the intergovernmental coordination and public participation provisions of the state's continuing planning process" (40 CFR 131.12(a)(2)/132 Appendix E, I.B) For this reason, the provision is also inconsistent with federal requirements. How can IDEM implement the "substantial weight" requirement without delegating or abdicating the key antidegradation decision on whether a reduction in water quality is necessary to accommodate social or economic development to a body without any CWA authority or expertise? (EC, VWI)

Response: It is a state statute requirement that the Commissioner give substantial weight to any applicable determination by a governmental entity (see IC 13-18-3-2(t)). IDEM does not agree that the CWA or EPA rules require that the decisions regarding the social and economic necessity of a discharge be made exclusively by IDEM. However, the Commissioner of IDEM retains all of his authority to make a final permit decision on a new or increased discharge.

Comment: The draft rule language at 327 IAC 2-1.3-6(c)(1) should be deleted from the draft rule or modified as suggested in the following:

> (1) may give weight to any applicable determinations by governmental entities regarding individual factors in subsection (b);

(EC, VWI)

***Response*:** The draft rule language reflects the statutory language applied to the rulemaking by the Indiana legislature at IC 13-18-3-2(t).

327 IAC 2-1.3-6(c)(2): IDEM cannot rationally rely on one factor

Comment: 327 IAC 2-1.2-6(c)(2), without further constraint, is inconsistent with the antidegradation policy set forth in 40 CFR 131.12 and in draft rule section 3. There are three fatal flaws in this provision. First, the determination of whether "a proposed discharge is necessary to accommodate important economic or social development in the area in which the waters are located under antidegradation standards and implementation procedures" requires consideration of a number of factors besides those in subsection (b)(15). The determination depends on both the "necessary" and the "importance" tests. The "necessary" test, which involves consideration of alternatives to the proposed discharge, is incorporated in subsection (b)(12), (b)(13), and (b)(14), as well as in draft rule section 6(d). No factors relevant to the "necessary test" are included in subsection (b)(15). Thus, if the commissioner relied on only the factors in subsection (b)(15), he or she could not apply the "necessary" test of alternatives. Thus, draft rule section 6(c)(2) as currently proposed would allow the primary determination required under antidegradation policy – that allowing the lowering of water quality is necessary to accommodate important economic or social development in the area in which the waters are located (see 40 CFR 131.12(a)(2) and draft rule sections 3(b) and 3(c)) – to be based solely on, for example, the number of jobs created. Why does IDEM allow the primary determination required under antidegradation policy – that allowing the lowering of water quality is necessary to accommodate important economic or social development in the area in which the waters are located – to be based solely on factors that do not address the "necessary" test of alternatives? (EC, VWI)

Response: The revised draft of the rule proposes the following for each antidegradation demonstration:

"(1) The availability, reliability, cost-effectiveness, and technical feasibility of the following:

(A) Nondegradation.

(B) Minimal degradation.

(C) Degradation mitigation techniques or alternatives.

(2) An analysis of the effluent reduction benefits and water quality benefits associated with the degradation mitigation techniques or alternatives required to be assessed under subdivision (1)(C), including the following:

(A) A review of pollution prevention alternatives and techniques that includes the following:

(i) A listing of alternatives and techniques, including new and innovative technologies.

(ii) A description of how the alternatives and techniques available to the applicant would minimize or prevent the proposed significant lowering of water quality.

(iii) The effluent concentrations attainable by employing the alternatives and techniques.

(iv) The costs associated with employing the alternatives and techniques.

(v) An identification of the pollution prevention alternatives and techniques selected to be employed and an explanation of why those selections were made.

(B) An evaluation of the feasibility and costs of connecting to an existing POTW or privately owned treatment works, within the vicinity of the proposed new or increased discharge, that:

(i) will effectively treat the proposed discharge; and

(ii) is willing to accept wastewater from other entities.

(C) For POTWs, if the proposed significant lowering of water quality is a result of a proposed new or increased discharge from one (1) or more indirect dischargers, the analysis shall also include the following:

(i) The requirements of clause (A) shall be completed for the indirect discharger or dischargers as well as for the POTW. The POTW may require the indirect dischargers to prepare this information.

(ii) If one (1) or more of the indirect dischargers proposes or does discharge to a combined sewer or sanitary sewer that is connected to a combined sewer, all combined sewer overflows (CSOs) between the point of discharge to the sewer and the POTW shall be identified.

(3) The availability, cost-effectiveness, and technical feasibility of central or regional sewage collection and treatment facilities, including long-range plans for discharges outlined in:

(A) state or local water quality management planning documents; and

(B) applicable facility planning documents.

(4) The availability, cost-effectiveness, and technical feasibility of discharging to another waterbody that is not an OSRW or has a higher assimilative capacity."

Comment: The second reason that 327 IAC 2-1.2-6(c)(2), without further constraint, is inconsistent with the antidegradation policy set forth in 40 CFR 131.12 and in draft rule section 3 is as follows: Even if draft rule section 6(c)(2) were to be reworded and limited to the "importance" test, the selection of factors in subsection (b)(15) omits several key social and economic factors listed in other subdivisions of subsection (b). Specifically, these additional social and economic factors are relegated to subsections (b)(6) through (b)(10), which state as follows:

(6) The anticipated impact of the proposed lowering of water quality on aquatic life and wildlife, considering the following:

(A) Threatened and endangered species.

(B) Important commercial or recreational sport fish species.

(C) Other individual species.

(D) The overall aquatic community structure and function.

(7) The anticipated impact of the proposed lowering of water quality considering the following:

(A) Human health.

(B) The overall quality and value of the water resource.

(8) The degree to which water quality may be lowered in waters located within the following:

(A) National, state, or local parks.

(B) Preserves or wildlife areas.

(C) OSRWs or ONRWs.

(9) The effects of lower water quality on the social and economic value of the receiving water or waters considering the following:

(A) Recreation, tourism, and other commercial activities.

(B) Aesthetics.

(C) Other use and enjoyment by humans.

(10) The extent to which the resources or characteristics adversely impacted by the

lowered water quality are unique or rare within the locality or state.

Only five of these thirteen factors overlap with the factors in the subsection (b)(15) factors: the impact on human health ((15)(I)); the impact on the quality of life for residents in the area ((15)(K)); the impact on fishing, recreation, and tourism ((15)(L)); and the impact on threatened or endangered species ((15)(M)). Thus, draft rule section 6(c)(2), even if modified to be limited to the "importance" test, would allow the commissioner to completely ignore the following factors in his or her determination of social or economic importance:

(1) the overall aquatic community structure and function
(2) the overall quality and value of the water resource
(3) national, state, or local parks
(4) preserves or wildlife areas
(5) OSRWs or ONRWs
(6) aesthetics
(7) other use and enjoyment by humans
(8) the extent to which the resources or characteristics adversely impacted by the lowered water quality are unique or rare within the locality or state.

Why does IDEM segregate a number of key social and economic factors outside of subdivision (b)(15) and then allow the commissioner to make the antidegradation demonstration finding based only on one or more factors within subdivision (b)(15)? (EC, VWI)

Response: The revised draft of the rule proposes the following social and economic information for consideration:

"(1) The anticipated impact on aquatic life and wildlife, considering the following:
(A) Threatened and endangered species.
(B) Important commercial or recreational sport fish species.
(C) Other individual species.
(D) The overall aquatic community structure and function.
(2) The anticipated impact on human health.
(3) The degree to which water quality may be lowered in waters located within the following:
(A) National, state, or local parks.
(B) Preserves or wildlife areas.
(C) OSRWs or ONRWs.
(4) The extent to which the resources or characteristics adversely impacted by the lowered water quality are unique or rare within the locality or state.
(5) Where relevant, the anticipated impact on economic and social factors, including the following:
(A) Creation, expansion, or maintenance of employment.
(B) The unemployment rate.
(C) The median household income.
(D) The number of households below the poverty level.
(E) Community housing needs.
(F) Change in population.
(G) The impact on the community tax base.
(H) Provision of fire departments, schools, infrastructure, and other necessary public services.
(I) Correction of a public health, safety, or environmental problem.

(J) Production of goods and services that protect, enhance, or improve the overall quality of life and related research and development.
(K) The impact on the quality of life for residents in the area.
(L) The impact on the fishing, recreation, and tourism industries.
(M) The impact on threatened and endangered species.
(N) The impact on economic competitiveness.
(O) Demonstration by the applicant that the factors identified and reviewed under clauses (A) through (N) are necessary to accommodate important social or economic development despite the proposed significant lowering of water quality.
(P) Inclusion by the applicant of additional factors that may enhance the social or economic importance associated with the proposed discharge, such as an approval that recognizes social or economic importance and is given to the applicant by:
(i) a legislative body; or
(ii) other government officials.

(6) Any other:
(A) action or recommendation relevant to the antidegradation demonstration:
(i) made by a:
(AA) state;
(BB) county;
(CC) township; or
(DD) municipality;
potentially affected by the proposed discharge; or
(ii) received during the public participation process; and
(B) factors that the commissioner:
(i) finds relevant; or
(ii) is required to consider under the CWA."

Comment: The third reason that 327 IAC 2-1.2-6(c)(2), without further constraint, is inconsistent with the antidegradation policy set forth in 40 CFR 131.12 and in draft rule section 3 is as follows: Even if draft rule section 6(c)(2) were to be reworded so it is limited to the "importance" test, the commissioner's determination" that a polluting activity is socially or economically "important" must weigh any benefits against the costs of lowering water quality and using assimilative capacity, such as impacts on endangered species, fishing, and aesthetics. The determination of importance normally cannot be made based on a single factor. For example, if a determination of importance is made based solely on the number of jobs gained, we cannot gauge how many added jobs make a facility expansion "important." We cannot know whether creating ten new jobs is "important" without weighing that benefit against the costs of the expansion. Similarly, we cannot know whether a decline in tourism is "important" without weighing that cost against the benefits of the expansion. A reasoned antidegradation determination cannot be made without weighing the costs and benefits, and this requires consideration of more than one factor. The effect of allowing the commissioner to make the "importance" decision based on a single factor is to grant unconstrained discretion and essentially vitiates the list of factors in draft rule section 6(b). How can the IDEM commissioner make a reasonable antidegradation determination based on a single factor when an accurate cost-benefit analysis requires the consideration of multiple factors? (EC, VWI)

Response: The revised draft of the rule proposes many social and economic factors for consideration. IC 13-18-3-2(s) requires the commissioner to consider a number of factors. While the language of IC 13-18-3-2(t) provides that the commissioner "may" rely on only one factor,

given the amount of information submitted by the applicant as part of the antidegradation demonstration, IDEM's intent is to incorporate all applicable factors into a decision.

Comment: There are alternative ways to fix the flaws in draft rule section 6(c)(2). A simple way is the following modified draft rule language:

(c) In determining whether a proposed discharge is necessary to accommodate important economic or social development in the area in which the waters are located under antidegradation standards and implementation procedures, the commissioner:

* * *

(2) shall consider the antidegradation demonstration factors listed in subsections (b)(1) through (b)(15);

(3) shall consider information received from the public pursuant to section 7 of this rule; and

(4) may consider any other information available to the commissioner.

(EC, VWI)

Response: The rule language necessarily reflects the statutory language applied to the rulemaking by the Indiana legislature at IC 13-18-3-2(t).

327 IAC 2-1.3-6(d): Options for applicant

Comment: At 327 IAC 2-1.3-6(d), lays out that a discharger may either accept BADCT limits or do an antidegradation demonstration that includes the information required under subdivision (2). The theoretical concept of BADCT is that it replaces a rigorous professional evaluation of different treatment options (for example, the "necessary" analysis of the antidegradation demonstration). Given the proposed definition of BADCT in Section 2(3) (see the Environmental Coalition's comments on the definition of BADCT), there is no indication or justification that setting BADCT as defined can adequately replace such an evaluation. Under draft rule section 6(d) as written, dischargers may opt out of a full consideration of alternatives by accepting particular BADCT limits. As a result, the BADCT limit is used in the draft rule as a "trigger" for antidegradation review: if the applicant meets the BADCT limit, the full antidegradation demonstration is not required. (It is not clear whether the importance test is still required.) This truncation of the alternatives analysis is not consistent with federal requirements or even with draft rule section 6(b). 40 CFR 131.12(a)(2) requires that the increased loading be shown to be necessary, but such increased loading is not necessary if there are alternative methods of handling the wastewater through which the increased loading could be avoided or minimized. BADCT, as defined in draft rule section 2, does not state the best feasible treatment for any of the categories to which it is applied. Moreover, even to the limited extent that BADCT limits could accurately be said to represent "state of the art," allowing a discharger to use BADCT limits in place of a proper antidegradation analysis would circumvent consideration of no discharge alternatives – alternatives that involve creating less wastewater or waste and alternative discharge locations. Can any dischargers opt out of a full consideration of alternatives, including the no-discharge alternative and alternative locations, by accepting particular BADCT limits? If so, how does this comply with antidegradation policy? Can any dischargers opt out of an importance test in draft rule section 6(b) by accepting particular BADCT limits? If so, how does this comply with antidegradation policy? (EC, VWI)

Response: In the revised draft of the rule, a discharger must evaluate non-degrading alternatives to show that the discharge is necessary before they will be allowed to accept BADCT limits in lieu of conducting an analysis of less degrading alternatives.

Comment: It appears that a discharger of sanitary wastewater could avoid controlling phosphorus or nitrogen – even to levels that are recognized as feasible (See Hypoxia in the Northern Gulf of Mexico, EPA Science Advisory Committee, EPA-SAB-08-003 (Dec. 2007)) – simply by accepting a permit with BADCT limits. Allowing unnecessary phosphorus and nitrogen pollution is clearly inconsistent with the CWA and prudent public policy. Can a discharger of sanitary wastewater avoid controlling phosphorus or nitrogen – even to levels that are recognized as feasible – simply by accepting a permit with BADCT limits? If so, how does this comply with antidegradation policy? (EC, VWI)

Response: A discharger of sanitary wastewater cannot avoid controlling phosphorus or nitrogen simply by accepting a permit with BADCT limits. BADCT limits are established on a pollutant by pollutant basis for a particular type of wastewater such as sanitary wastewater. The selection of the regulated pollutants that will be limited in a permit or addressed in an antidegradation demonstration is independent of the establishment of BADCT limits. Therefore, the acceptance of the BADCT limits for CBOD, TSS and ammonia as N will not have any impact on the permit requirements for phosphorus or nitrogen.

Comment: Draft rule section 6(b)(12) and (13) seems to require a broad consideration of alternatives. It is, then, difficult to reconcile draft rule section 6(d) with sections 6(b)(12) and (13). Similarly, it is also difficult to reconcile draft rule section 6(d) with section 7(c) and (d)(1). Sections 7(c) and (d)(1) appear to require the commissioner to deny a permit where less polluting alternatives are available or nondegradation alternatives have been examined without regard to the BADCT provision. Is draft rule section 6(d) fully consistent with the other provisions of the draft rule, particularly sections 6(b)(12) and (13), and 7(c) and (d)(1)? (EC, VWI)

Response: The rule language has been revised and concerns about inconsistencies with BADCT should be resolved.

Comment: Perhaps, some provision like the rule language at draft rule 327 IAC 2-1.3-6(d) could properly be adopted. However, the problems with the definition of BADCT would first have to be remedied, and draft rule section 6(d) would have to do the following:

(1) assure that no-discharge alternatives, and alternative discharge locations, are considered before BADCT could be selected; and

(2) be based on defined BADCT limits that really were close to the "state of the art" or at least actually represented the best treatment already being practiced for the relevant group of dischargers.

Based on the current record, the BADCT exception at draft rule section 6(d)(1) should be deleted. (EC, VWI)

Response: The rule language has been revised and now requires the consideration of 'no discharge' alternatives before the selection of BADCT limits.

327 IAC 2-1.3-7 Commissioner's determination on antidegradation demonstration application

Comment: At 327 IAC 2-1.3-7(a), the public notice provision requires a public meeting on an exemption justification if the proposed discharge is to an OSRW. Discharges to tributaries of OSRWs do not require a public meeting, however, even though discharges into such tributaries may have a significant impact on the water quality of the OSRW. The term "tributary of an OSRW" is defined at 327 IAC 2-1.3- 2(63), but it appears that this term is not used within the substantive parts of the draft rule. Section 7(a) should say that a public meeting is required for any proposed discharge to an OSRW or to a tributary of an OSRW. Why did IDEM omit

discharges into tributaries to OSRWs from the requirement of a public meeting, even though IDEM recognizes that discharges into tributaries of OSRWs can significantly lower the water quality within OSRWs? (EC, VWI)

Response: The revised draft of the rule deletes the definition of "tributary of an OSRW" because the definition did not clearly delineate "upstream segments". Designated OSRWs are clearly delineated, and IDEM believes applying the public notice to the OSRW provides a clear standard. A public meeting may be requested for antidegradation demonstrations on discharges to tributaries of OSRWs or any other waters.

Comment: The following is suggested rule language to replace the draft rule language at 327 IAC 2-1.3-7(a):

(a) Upon receipt of an antidegradation demonstration application, the commissioner shall provide notice and request comment according to 327 IAC 5-2-11.2. The commissioner shall hold a public meeting on the antidegradation demonstration application in accordance with 327 IAC 5-2-11.2 if:

(1) the proposed discharge is to an OSRW or to a tributary of an OSRW;

(EC, VWI)

Response: IDEM believes applying the public notice to the OSRW provides a clear standard. A public meeting may be requested for antidegradation demonstrations on discharges to tributaries of OSRWs or any other waters.

327 IAC 2-1.3-7(f): Explanation of commissioner's decision

Comment: At 327 IAC 2-1.3-7(f) concerning the commissioner's determination on an antidegradation demonstration application, the draft rule language should clarify IDEM's obligations under antidegradation and the public notice requirement. To that end, the draft rule language should require IDEM to document, with regard to the commissioner's decision on the antidegradation demonstration: (1) which factors the commissioner considered in making his or her determination; (2) what weights these factors were given; and (3) what determinations of other governmental entities were considered. (EC, VWI)

Response: The draft rule has been revised to include the determining factors relied upon by the commissioner:

"When the commissioner makes a determination on an antidegradation demonstration, the commissioner shall public notice the antidegradation demonstration determination according to 327 IAC 5-2-11.2 and the final determination shall:

(1) summarize, in the public notice form the determining factors relied upon by the commissioner; and

(2) if approved, be incorporated into the

(A) draft permit; and

(B) fact sheet;

that are made available for public comment under 321 IAC 5-3-9."

Comment: The following is suggested rule language to replace the draft rule language at 327 IAC 2-1.3-7(f):

(f) When the commissioner makes a determination on an antidegradation demonstration application, the commissioner shall:

(1) state which factors the commissioner considered in making his or her determination;

(2) state what determinations of other governmental entities were considered; and

(3) public notice the antidegradation demonstration determination according to 327 IAC

5-2-11.2 and the final determination shall be:

(A) summarized in the public notice form prepared by the commissioner; and

(B) incorporated into the draft permit and the fact sheet that is made available for public comment under 327 IAC 5-3-9.

(EC, VWI)

Response: The draft rule has been revised to include the determining factors relied upon by the commissioner:

"When the commissioner makes a determination on an antidegradation demonstration, the commissioner shall public notice the antidegradation demonstration determination according to 327 IAC 5-2-11.2 and the final determination shall:

(1) summarize, in the public notice form the determining factors relied upon by the commissioner; and

(2) if approved, be incorporated into the

(A) draft permit; and

(B) fact sheet;

that are made available for public comment under 321 IAC 5-3-9."

327 IAC 2-1.3-7(g): Water quality improvement in OSRWs

Comment: At 327 IAC 2-1.3-7(g) regarding water quality improvement projects, the draft rule uses the term watershed in this provision without specifying the HUC level (HUC is the acronym for Hydrologic Unit Code (HUC). Every hydrologic unit is identified by a unique HUC consisting of 2 to 14 digits based on the levels of classification in the hydrologic unit system. The lower-48 states have 18 2-digit HUCs. See http://water.usgs.gov/nawqa/sparrow/wrr97/geograp/geograp.html This failure to specify the HUC level would, according to the definition of watershed at 327 IAC 2-1.3-2(69) (which follows IC 14-8-2-310), allow an "offsetting" improvement project to be implemented hundreds of miles away from the location of the significant reduction in water quality. The HUC level must be provided in the provision, and that level should be equal to or higher than a ten-digit HUC (for example, HUC-10, 11, or 14). (EC, VWI)

Response: The HUC level is not specified in the rule because existing statutory language at IC 13-18-3-2 (l) does not specify a HUC level. However, IDEM will suggest that all water quality improvement projects in the watershed be at the HUC-10 scale.

Comment: The following is suggested rule language to replace the draft rule language at 327 IAC 2-1.3-7(g):

(g) In addition to the information provided in the antidegradation demonstration application according to subsection (b)(1) and (b)(2), a discharger proposing to cause a significant lowering of water quality in an OSRW shall:

(1) implement a water quality improvement project in the HUC-10 or HUC-11 watershed of the affected OSRW; or

(2) fund a water quality improvement project in the HUC-10 or HUC-11 watershed of the affected OSRW by payment of a fee into the OSRW improvement fund established under IC 13-18-3-14;

for each activity undertaken that will result in a significant lowering of water quality in an OSRW. A discharger proposing to implement or fund a water quality improvement project shall submit an application as required under section 8 of this rule.

(EC, VWI)

Response: The HUC level is not specified in the rule because existing statutory language at IC 13-18-3-2 (l) does not specify a HUC level.

Comment: The Environmental Coalition incorporated as part of its comments on the antidegradation draft rule the complete draft rule modified according to rule language changes suggested by the Environmental Coalition. That modified draft rule is included in whole as part of these comments. (EC, VWI)

Response: IDEM appreciates the commenter providing suggested rule changes. IDEM has reviewed and responded to all comments submitted.

Comment: The Environmental Coalition incorporated as part of its comments on the antidegradation draft rule the Environmental Coalition's Antidegradation Subgroup submission of October 2008. That submission is included in whole as part of these comments. (EC, VWI)

Response: IDEM has reviewed and responded to all comments submitted.

REGULATED ENTITIES - INDUSTRY

Rule is vague and renders facility planning impossible

Comment: A technical analysis of the draft antidegradation rule was generated by ENVIRON as part of a joint effort among the members of the IUG and the Indiana Manufacturers Association. The technical analysis focuses upon the insurmountable vagaries of the draft rule that render it impossible for a potentially regulated facility to model and plan for the regulatory goals Indiana would impose. Additionally, the IUG comments incorporate by reference the written comments by Bill Beranek, Indiana Environmental Institute, Inc (IEI). The observations of the IEI succinctly outline four main issues that are unaddressed in the draft rule that create uncertainty as to whether it could be consistently implemented. These issues are as follows:

(1) The information and analysis required by IDEM for a complete socioeconomic review are not defined.

(2) The criteria to be used by IDEM to judge whether the activity related to the discharge accommodates important economic or social development in the area are not defined.

(3) The information and analysis required to be provided to IDEM for a substantive technical analysis of alternatives to the loading are not defined.

(4) The criteria to be used by IDEM to decide whether a proposed activity will meet the demonstration to allow for lowering of water quality are not defined in a manner to assure transparent, predictable, and consistent decisions.

The draft rule is flawed in these significant aspects. (IUG)

Response: The draft rule has been revised to add clarity on the submission requirements for the elements of an antidegradation demonstration. Further clarity, if needed, is more appropriate for nonrule policy development.

Rule could limit economic progress

Comment: The primary concern regarding antidegradation relates to the practical impacts of implementation. If not properly implemented, the program could place severe limitations on important social equity/improvement issues and economic progress for the affected communities without resulting in any significant benefit to water quality. This will seriously impair attempts to revitalize existing brownfield communities and will compromise the competitiveness of existing

industries within those communities by limiting their ability to expand or change technologies. The antidegradation standard and implementation procedures for waters of the state should be crafted in a way that will be protective of the receiving waters and support the economic viability of existing industries and the affected communities. (ISEG)

Response: IDEM believes, as outlined in the revised draft of the rule, the antidegradation standards and implementation procedures for waters of the state are crafted in a way that will be protective of the receiving waters and support the economic viability of existing industries and the affected communities.

Rule is overly broad and burdensome

Comment: The draft rule contains a number of revisions to the current Indiana water quality standards rules. Some of these revisions will result in more frequent issuance of permit limits, more stringent permit limits, significant changes in facility operations, and restrictions or even prohibitions on new and increased discharges. These changes will lead to enormous additional compliance costs, increases in taxes for Indiana residents and businesses, and adverse impacts on economic growth and employment in the state. Despite these significant impacts, there will be little environmental benefit from some of the new requirements. Therefore, IDEM and the Water Pollution Control Board (WPCB) needs to consider, for each proposed regulatory change, whether the change is truly necessary and whether its benefits justify the resulting social and economic impacts. (BT, AWO, IWQC-IMA)

Response: The objective of the rulemaking process, is in part, to consider whether the proposed regulatory changes are truly necessary and whether the benefits of the changes justify the resulting impacts. A fiscal impact analysis will be completed on the revised draft rule.

Comment: The draft rule includes an extensive set of provisions that impose requirements on dischargers to waters that already have water quality that is better than applicable water quality standards and impose additional requirements on dischargers to waters that have significant resource value. For waters with quality that is already better than the water quality standards, the draft rule will impose additional requirements because the water constitutes an important resource that, for policy reasons, is deemed worthy of special protection. This is a policy judgment, not an environmental protection judgment, because water quality already is sufficiently protected by water quality standards. The draft rule would have substantial adverse social and economic impacts due to requirements that have no sound scientific basis. (BT, AWO, IWQC-IMA)

Response: The draft rule is required to implement federal law. The federal antidegradation regulatory policy is designed to prevent deterioration of existing levels of good water quality unless the action responsible for the deterioration provides a social or economic benefit. The Federal antidegradation policy is found at Clean Water Act (CWA) section 303(d), 33 U.S.C. § 1313(d) and 40 CFR §131.12.

Comment: The scope of the antidegradation rules is overly broad. The antidegradation review process requires IDEM to make determinations concerning complicated social and economic factors for which the agency is ill-equipped. As a result, implementation of the rule requirements has the potential to create substantial additional delays in the processing of permit applications and requests for permit modifications. (BT, AWO, IWQC-IMA)

Response: The draft rule is required to implement federal law. The federal antidegradation regulatory policy is designed to prevent deterioration of existing levels of good water quality unless the action responsible for the deterioration provides a social or economic

benefit. This federal directive necessitates the evaluation of social and economic factors.

Comment: The antidegradation draft rule requirements need to be easier for permit applicants to understand and for IDEM to implement. Specifically, the regulations more clearly should spell out: (1) when an applicant seeking permission for an increase in its discharge must submit an antidegradation demonstration; (2) the required content for such a demonstration; and (3) the legal standard by which the adequacy of the demonstration will be evaluated and any increase allowed. Clear regulations would provide a much-needed guide and certainty for industry, the public and IDEM. (BT, AWO, ICC, NIF)

Response: The draft rule has been revised to add clarity on the applicability of the rule and the submission requirements for the elements of an antidegradation demonstration.

Comment: The antidegradation draft rule should be simplified, and the draft rule must be re-drafted with the following goals in mind:

(1) Minimize the expenses to regulated entities required to comply with the rules.

(2) Achieve the regulatory goal in the least restrictive manner.

(3) Avoid duplicating standards found in state or federal laws.

(4) Improve ease of comprehension.

(5) Have practical enforcement.

Even though there is a requirement to have antidegradation rules in place by federal law, the rules at I.C. 4-22-2-19.5 apply to this rulemaking because the federal language to adopt an antidegradation policy is not prescriptive of the specific rule requirements that states must adopt to meet the federal requirements. However, the draft rule appears to apply to anyone, when the rules were originally intended to apply to NPDES permittees and any state-regulated nonpoint source discharges. The draft rule also appears to apply to any discharge of anything, when the rules were originally intended to apply to a more limited subset of sufficient parameters that could impact designated uses. By incorporating broad terms (such as Indiana's definition of "pollutant") and requiring detailed calculations for substances that have no water quality standards, the rules have become a quagmire and require the expenditure of substantial time, money, and energy to achieve compliance. IDEM and private parties have limited resources. Administrative necessity requires a more focused set of antidegradation rules, especially when the benefits of such detailed regulation become more and more marginalized. As written, the draft rule applies to anyone who would discharge anything to any surface water within or adjacent to Indiana's borders. The net cast by these rules could ensnare, for example, a person washing a car in his or her driveway who allows the runoff water to flow into any surface water falling within the broad definition. This is well beyond the scope of the federal antidegradation rules and would lead to absurd results and be administratively unfeasible for IDEM to enforce. (IWQC-IMA, IUG)

Response: The draft rule has been revised to add clarity on the applicability of the rule. Additionally , in the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant" and the proposed definition of regulated pollutant is: "Regulated pollutant" means any:

(A) parameter:

(i) for which water quality criteria have been adopted in or developed pursuant to 327 IAC 2-1 and 327 IAC 2-1.5;

(ii) including narrative and numeric criteria;

(iii) including nutrients, specifically phosphorus and nitrogen; and

(iv) excluding biological criteria, pH, and dissolved oxygen; and

(B) other parameter that may be limited in an NPDES permit as a result of, but not limited to:

(i) best professional judgment;

(ii) new source performance standards;
(iii) best conventional pollutant control technology;
(iv) best available technology economically achievable; or
(v) best practicable control technology currently available;

for the appropriate categorical guidelines of 40 C.F.R. 400 to 40 C.F.R. 471."

Comment: The CWA delegates to states the authority to develop and adopt a statewide antidegradation policy that effectively protects surface waters in Indiana without harming business and industry. The state's policy is required to: (1) protect designated water uses, (2) follow legal procedures for revising or adopting standards, (3) be based upon appropriate technical and scientific data and analyses, and (4) be consistent with other specialized requirements. The draft rule should meet these requirements in a more balanced manner than what is provided by the current draft rule. (IUG)

Response: The draft rule has been revised to provide more clarity in the applicability and implementation of the rule.

Comment: Under the CWA, EPA may only require states to adopt and implement the federal antidegradation policy against point source discharges. *American Wildlands v. Browner*, 94 F.Supp.2d 1150, 1164-65 (D. Colo. 2002) ("Congress has left the regulation of nonpoint sources up to the states."), *aff'd* 260 F.3d 1192, 1198 (10th Cir. 2001) ("In the Act, Congress has chosen not to give the EPA the authority to regulate nonsource pollution."). These point source discharges are subject to NPDES permit requirements, represent a significant source of discharges into surface waters of the state, and are a finite source of persons to be regulated. Despite the broad language of 40 CFR 131.12(a)(2), which states that states "shall assure that there shall be achieved … all cost-effective and reasonable best management practices for nonpoint source control," States are not required to regulate nonpoint source discharges. *American Wildlands*, 260 F.3d at 1198; EPA Water Quality Handbook, Ch. 4, Section 4.5 ("Section 40 CFR 131.12(a)(2) does not require that States adopt or implement best management practices for nonpoint sources prior to allowing point source degradation of a high quality water. However, states that have adopted nonpoint source controls must assure that such controls are properly implemented before authorization is granted to allow point source degradation of water quality.").[2/] Rather than trying to regulate any discharge, IDEM should focus its antidegradation efforts and limited resources on dischargers who are already subject to NDPES permit regulations. (IWQC-IMA)

Response: The draft rule has been revised to add clarity on the applicability of the rule. Additionally , in the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant" and the proposed definition of regulated pollutant is: "Regulated pollutant" means any:

(A) parameter:
(i) for which water quality criteria have been adopted in or developed pursuant to 327 IAC 2-1 and 327 IAC 2-1.5;
(ii) including narrative and numeric criteria;
(iii) including nutrients, specifically phosphorus and nitrogen; and
(iv) excluding biological criteria, pH, and dissolved oxygen; and

---

[2]/ *See also* EPA Water Quality Handbook, Ch. 4.6 ("There is a direct Federal implementation mechanism to regulate point sources of pollution but no parallel Federal regulatory process for nonpoint sources."); Water Quality Guidance for the Great Lakes System: Supplementary Information Document (SID) (hereinafter, "SID"), EPA 1995, p. 205, Ch. VII (A)(1) ("The applicability of antidegradation to nonpoint sources is also a source of confusion. … Neither the antidegradation provisions contained in the final Guidance, nor existing regulations, confer any additional authority upon States, Tribes or EPA to regulate nonpoint sources of pollution."

(B) other parameter that may be limited in an NPDES permit as a result of, but not limited to:

(i) best professional judgment;
(ii) new source performance standards;
(iii) best conventional pollutant control technology;
(iv) best available technology economically achievable; or
(v) best practicable control technology currently available;

for the appropriate categorical guidelines of 40 C.F.R. 400 to 40 C.F.R. 471."

Comment: In addition to the fact that EPA cannot enforce the federal antidegradation policy against nonpoint sources or require IDEM to enforce the policy against non-regulated nonpoint sources, the draft rule may also be subject to an attack for failing to provide procedural due process as required by the 14th Amendment to the U.S. Constitution and Article 1, Section 12 of the Indiana Constitution. *Brown v. State*, 868 N.E.2d 464, 467 (Ind. 2007); *Healthscript, Inc. v. State*, 770 N.E.2d 810, 815-816 (Ind. 2002). Under these cases, a statute can be declared void for failing to provide adequate due process where the prohibited conduct is too vague, fails to provide "fair warning" of what exactly is prohibited, and may result in discretionary enforcement. (IWQC-IMA)

Response: The draft rule is intended to apply to any discharge which IDEM has previously been granted the authority to regulate.

Comment: Further, IDEM may exclude nonpoint source discharges from the antidegradation draft rule under the doctrines of "absurd results" and "administrative necessity." Some have argued that the federal antidegradation regulations broadly prohibit any new or increased discharge of anything to surface waters of the state, including unregulated nutrients and sediments,[1/] so that IDEM cannot limit its enforcement of antidegradation to certain pollutants. Such thinking is contrary to the federal antidegradation regulations, which allow States to prioritize the pollutants subject to antidegradation review. *See* 40 CFR 131.11(a)(1), which provides that "States must adopt those water quality criteria that protect designated use. Such criteria must be based on sound scientific rationale and must contain *sufficient parameters or constituents* to protect the designated use." (Emphasis added.) Clearly, IDEM does not need to try to regulate every possible substance that could be introduced into a surface water, which appears to be what IDEM has tried to do by including calculations for pollutants without water quality standards and using the broadly-defined terms of "toxic substances"[2/] and "pollutants."[3/] (IWQC-IMA)

Response: The draft rule has been revised to add clarity on the applicability of the rule. Additionally, in the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant" and the proposed definition of regulated pollutant is: "Regulated pollutant" means any:

(A) parameter:

(i) for which water quality criteria have been adopted in or developed pursuant to 327 IAC 2-1 and 327 IAC 2-1.5;

[1/] Petition for Corrective Action or Withdrawal of the National Pollutant Discharge Elimination System Program Delegation from the State of Indiana (hereinafter, "Petition for Corrective Action"), by the Hoosier Environmental Council, the Hoosier Chapter of the Sierra Club, and the Environmental & Policy Center of the Midwest to U.S. EPA Administrator Lisa Jackson, dated December 17, 2009, pp. 5-6.

[2/] Antidegradation Rules, p. 29, 327 IAC 2-1.3-2(61) ("Toxic substances means substances that are or *may become* harmful to: aquatic life, humans, other animals, plants, or food chains when present in sufficient concentrations or combinations. The term includes those substances identified as toxic under Section 307(a) of the CWA.")(Emphasis added).

[3/] Antidegradation Rules, p. 27, 327 IAC 2-1.3-2(42).

(ii) including narrative and numeric criteria;
(iii) including nutrients, specifically phosphorus and nitrogen; and
(iv) excluding biological criteria, pH, and dissolved oxygen; and

(B) other parameter that may be limited in an NPDES permit as a result of, but not limited to:

(i) best professional judgment;
(ii) new source performance standards;
(iii) best conventional pollutant control technology;
(iv) best available technology economically achievable; or
(v) best practicable control technology currently available;

for the appropriate categorical guidelines of 40 C.F.R. 400 to 40 C.F.R. 471."

IDEM does not anticipate trying to regulate every possible substance. However, there is a balancing that must occur to determine what is achievable and what is absurd. Implementation of the rule will incorporate the use of sound scientific practices.

Comment: Not only do the federal antidegradation regulations not say what certain groups believe it to say, but as the U.S. Supreme Court has explained, the plain meaning of a statutory provision is not conclusive; i.e., "in the 'rare case' [in which] the literal application of a statute will produce a result demonstrably at odds with the intentions of the drafters . . . the intentions of the drafters, rather than the strict language, controls." *United States v. Ron Pair Enters., Inc.*, 489 U.S. 235, 242 (1989). As EPA recently explained in connection with its proposed Greenhouse Gas Tailoring Rule to limit the number of greenhouse gas emitters who must obtain new permits:

> The D.C. Circuit, in surveying the doctrine [of absurd results] over more than a century of jurisprudence, characterized the body of law in absolute numbers as comprising "legions of court decisions." *In re Franklyn C. Nofziger*, 925 F.2d 428, 434 (D.C. Cir. 1991). The U.S. Supreme Court cases include, among others, *Nixon v. Missouri Municipal League*, 541 U.S. 125, 132-133 (2004)("any entity" includes private but not public entities); … *Train v. Colorado Public Interest Research Group, Inc.*, 426 U.S. 1, 23-24 (1976) (prohibition in Federal Water Pollution Control Act against discharging into navigable waters "pollutants," which are defined to include "radioactive materials," does not apply to three specific types of radioactive materials"; *Lynch v. Overholser*, 369 U.S. 705, 710 (1962) (statutory construction is not confined to the "bare words of the statute"); *Utah Junk Co. v. Porter*, 328 U.S. 39, 44 (1946)("literalness may strangle meaning")….
>
> The D.C. Circuit has also had several decisions apply the absurd results doctrine to avoid a literal interpretation or application of statutory provisions. *See* … *Environmental Defense Fund v. EPA*, 82 F.3d 451, 468-469 (D.C. Cir. 1996)(although Clean Air Act requires that a Federal action conform to the State implementation plan that is currently in place, EPA may instead require conformity to a revised implementation plan that State Commits to develop; "[t]his is one of those rare cases … [that] requires a more flexible, purpose-oriented interpretation if we are to avoid 'absurd or futile results.'")….

Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 74 Fed. Reg. 55292, 55306-55307 (Oct. 27, 2009).

Drafting antidegradation rules so broadly as to apply to anyone who discharges anything to any surface water of the state would lead to absurd results. The number of people who would call or apply to IDEM for determinations under the antidegradation draft rule could be staggering. In times of limited budgets, limited administrative resources, and limited private resources, IDEM should not want to be inundated with questions and determinations related to trivial discharges, where the

federal antidegradation regulations are truly aimed at significant sources of increased loading of regulated pollutants to high quality waters. Significantly, the antidegradation rules of the Great Lakes system (327 IAC 2-1.5-4) and several states (Illinois, Michigan, and Minnesota) have limited the scope of their antidegradation programs to NPDES permittees only. And, each of these programs has been approved by EPA Region 5. For these reasons, the IWQC and IMA suggest that IDEM specifically limit the antidegradation rule to NPDES permittees. To do so, we suggest that the following phrase be added to the end of 327 IAC 2-1.3-1(b), "… by any person required to have a National Pollutant Discharge Elimination System ("NPDES") permit pursuant to 327 IAC 5-2-2." (IWQC-IMA)

Response: The draft rule has been revised: "…the antidegradation implementation procedures established by this rule apply to a proposed new or increased loading of a regulated pollutant to a surface water of the state that will result from a deliberate action including a change in process or operation that adds additional regulated pollutants or creates an increase in loading of a regulated pollutant already being discharged".

"Regulated pollutant" means any:

(A) parameter:

(i) for which water quality criteria have been adopted in or developed pursuant to 327 IAC 2-1 and 327 IAC 2-1.5;

(ii) including narrative and numeric criteria;

(iii) including nutrients, specifically phosphorus and nitrogen; and

(iv) excluding biological criteria, pH, and dissolved oxygen; and

(B) other parameter that may be limited in an NPDES permit as a result of, but not limited to:

(i) best professional judgment;

(ii) new source performance standards;

(iii) best conventional pollutant control technology;

(iv) best available technology economically achievable; or

(v) best practicable control technology currently available;

for the appropriate categorical guidelines of 40 C.F.R. 400 to 40 C.F.R. 471."

Comment: The antidegradation draft rule should be simplified to clearly and explicitly explain which substances are subject to the regulations. Contrary to what some may believe, IDEM does not have to anticipate and regulate every possible substance that could be introduced into a surface water of the state under the antidegradation regulations. The federal antidegradation regulations are clear that "States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain *sufficient parameters or constituents* to protect the designated use." 40 CFR 131.11(a) (emphasis added). There is no requirement to include every possible parameter or constituent. Further, "Criteria are elements of state water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. *When criteria are met, water quality will generally protect the designated use*." 40 CFR 131.3(b). Accordingly, there is no mandate that IDEM try to include every possible parameter that exists. Again, the state and private parties (who are required under the proposed rules to calculate criteria for substances that may have no water quality standards) have limited resources, limited administrative capacity, and in some cases limited expertise to make these determinations. Instead of a regulatory scheme that defines toxic substances and pollutants as encompassing anything and everything, the definitions should be narrowed and simplified as explained below. This would meet the rulemaking requirements under I.C. 4-22-2-19.5(a) of minimizing expenses to regulated entities required to

comply with the rules, achieving the regulatory goal in the least restrictive manner, avoiding duplication of existing standards in other state and federal laws, imposing ease of comprehension, and allowing for practical enforcement. (IWQC-IMA, NIF)

Response: The draft rule has been revised and "pollutant of concern" has been replaced with "regulated pollutant" and the proposed definition of regulated pollutant is: "Regulated pollutant" means any:

(A) parameter:

(i) for which water quality criteria have been adopted in or developed pursuant to 327 IAC 2-1 and 327 IAC 2-1.5;

(ii) including narrative and numeric criteria;

(iii) including nutrients, specifically phosphorus and nitrogen; and

(iv) excluding biological criteria, pH, and dissolved oxygen; and

(B) other parameter that may be limited in an NPDES permit as a result of, but not limited to:

(i) best professional judgment;

(ii) new source performance standards;

(iii) best conventional pollutant control technology;

(iv) best available technology economically achievable; or

(v) best practicable control technology currently available;

for the appropriate categorical guidelines of 40 C.F.R. 400 to 40 C.F.R. 471."

Trigger

Comment: The draft rule fails to clearly identify the regulated entities. As written, the draft rule fails to clearly identify the regulated entities, creating a problem for both IDEM and confusion for the regulated community and the public. The antidegradation rule may be invalidated for being unconstitutionally vague if ordinary people cannot understand the conduct it prohibits or if it authorizes or encourages arbitrary or discriminatory enforcement. *Brown v. State,* 868 N.E. 2d 464, 467 (Ind. 2007). As written, the rule fails to clearly define its targeted pollutants or sources and is therefore not understandable to the ordinary person and it encourages arbitrary or discriminatory enforcement. This problem can be solved by looking at the following U.S. EPA approved Region V programs: Illinois, Michigan, Minnesota, Ohio, Wisconsin and the Great Lakes System, which all limit the antidegradation implementation to regulated point and nonpoint sources holding permits or enforceable authorization. IDEM should follow its example and create a definitive scope for the antidegradation rule. The following is suggested language for revising 327 IAC 2-1.3-1 regarding the applicability of antidegradation standards and implementation procedures"

Sec. 1. (a) The antidegradation standards established by this rule apply to all surface waters of the state.

(b) Except as provided under section 4 of this rule, the antidegradation implementation procedures established by this rule apply to a proposed new or increased loading of a pollutant of concern to a surface water of the state <u>as regulated by the NPDES program for point sources and authorized BMPs for nonpoint sources and which results in a modification to the authorization for discharge because of an increased loading.</u>

(IUG)

Response: The draft rule has been revised to add clarity on the applicability of the rule:

"Except as provided under section 4 of this rule, the antidegradation implementation procedures established by this rule apply to a proposed new or increased loading of a regulated pollutant to a surface water of the state that will result from a deliberate action including a change in process or operation that adds additional regulated pollutants or creates an increase in loading of a regulated pollutant already being discharged." Additionally, in the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant" and the proposed definition of regulated pollutant is: "Regulated pollutant" means any:

(A) parameter:

(i) for which water quality criteria have been adopted in or developed pursuant to 327 IAC 2-1 and 327 IAC 2-1.5;

(ii) including narrative and numeric criteria;

(iii) including nutrients, specifically phosphorus and nitrogen; and

(iv) excluding biological criteria, pH, and dissolved oxygen; and

(B) other parameter that may be limited in an NPDES permit as a result of, but not limited to:

(i) best professional judgment;

(ii) new source performance standards;

(iii) best conventional pollutant control technology;

(iv) best available technology economically achievable; or

(v) best practicable control technology currently available;

for the appropriate categorical guidelines of 40 C.F.R. 400 to 40 C.F.R. 471."

Comment: The draft rule should contain an applicability provision that uses a bright line trigger that necessitates a new or modified NPDES permit. The draft rule at 327 IAC 2-1.3-6(a) includes a trigger to conduct an antidegradation review when there is a new or increased loading of a pollutant of concern that results in "significant lowering of water quality" in the receiving waterbody. There are some proposed discharges that will result in an increased loading of a pollutant of concern although there is no need for a new or modified NPDES permit limit. The draft rule should be modified so that an antidegradation review is required only when a new or increased discharge triggers the need for a new or modified NPDES permit limit and involves a significant lowering of water quality above a specified de minimis threshold. Using new or increased permit limits as the trigger clearly allows facilities to continue their normal operational practices, which frequently rely on a significant margin of safety to ensure that normal operational variability does not result in permit violations. If IDEM does not revise the draft rule to maintain this trigger for antidegradation review, the draft rule should be revised to clarify that incursions into normal operational safety margins due to anticipated variability and other routine increases should not trigger review. (BT, AWO, IWQC-IMA, ISEG, NIF)

Response: The draft rule has been revised to add clarity on the applicability of the rule: "Except as provided under section 4 of this rule, the antidegradation implementation procedures established by this rule apply to a proposed new or increased loading of a regulated pollutant to a surface water of the state that will result from a deliberate action including a change in process or operation that adds additional regulated pollutants or creates an increase in loading of a regulated pollutant already being discharged." Additionally, the draft rule exempts from the antidegradation demonstration increases due to operational variability that are covered by an existing applicable permit.

Rule needs clarity

Comment: The draft rule needs to contain a description of the baseline year that a company is to use to assess the increases below de minimis. The draft rule also needs to contain a description of: (1) how this would be tracked; and (2) who would be responsible for tracking it. In its Response to Comments for the First Notice of Comment Period, IDEM alluded to the notion that the unused loading capacity as of the date of the first request would be the baseline. (BT)

Response: The benchmark available loading capacity is equal to ninety percent (90%) of the available loading capacity established at the time of the request for the initial increase in the loading of a regulated pollutant. The initial increase referenced is the first request after the effective date of this rule.

Comment: The IWQC and IMA support IDEM's decision response to comments that the calculation of "total loading capacity" be established at the time of request to include any additional proposed effluent flow. The IWQC and IMA believe that IDEM is correct in including the proposed flow of an increase in discharge for both municipal and industrial facilities in the calculation of total loading capacity. (IWQC-IMA)

Response: IDEM believes it is appropriate to include the effluent flow in the calculation of total loading capacity.

Comment: The draft rule should contain a provision pertaining to the time for IDEM's rejection or approval of exemption applications. Those in the regulated community should be informed as quickly as possible whether IDEM accepts or rejects an exemption application, and need the certainty of knowing that there is a clear time period by which they can expect such a determination. (BT, AWO, IWQC-IMA)

Response: The concept of the exemption justification has been removed from the revised draft of the rule. The revised draft requires some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit. IDEM is subject to statutory deadlines to process any permit application or modification.

Comment: The draft rule needs to contain a provision to address situations in which the permittee may notify IDEM by telephone and provide the relevant information, with a follow-up written notification within five (5) business days, when the discharger has a temporary increase due to maintenance issues or the installation of new equipment, which causes discharges within existing capacity and pursuant to an approved operation within the context of their permit. Requiring permittees to obtain confirmation from IDEM to be sure they are not triggering antidegradation review in such cases would be unduly burdensome for both the agency and the permittee. Similarly, there may be cases in which a permittee may have other types of short-term, emergency use needs. (BT, AWO, IWQC-IMA)

Response: There is no notification requirement when the discharger remains within its permit limits. If the discharger is going to increase a pollutant above the permitted level due to maintenance or introduce a new pollutant to the discharge, the permit already addresses that in Part II.B.2 (Bypass of Treatment Facilities), Part II.C.1 (Planned Changes in Facility or Discharge), Part II.C.3 (Twenty Four Hour Reporting Requirements), Part II.C.9 (Changes in Discharge of Toxic Substances). If the increase is temporary, then it

may also qualify as being a short-term, temporary discharge that is not subject to antidegradation review.

Comment: The draft rule should be revised to include language that clarifies that projects reviewed under the existing antidegradation rule are not subject to a reopener once the draft rule eventually becomes effective. There is no clear provision in the draft rule concerning projects already reviewed under the current antidegradation rule. For example, if a project has been reviewed and complies with the current antidegradation requirements, IDEM should not review it again under new rule requirements, even if that project has not been completed as of the date that the draft rule becomes a final rule. (BT, AWO)

Response: At the time of issuance, all permits must meet all applicable standards.

Definitions

Comment: The definition section at 327 IAC 2-1.3-2 states that the definitions apply throughout draft new rule, 327 IAC 2-1.3, and to 327 IAC 2-1 (water quality standards for waters outside the Great Lakes system) and 327 IAC 2-1.5 (water quality standards for Great Lakes system waters). However, both 327 IAC 2-1 and 327 IAC 2-1.5 contain a set of definitions, and many of the definitions in this section are duplicative of those definitions. Therefore, the definitions in 327 IAC 2-1.3-2 should apply only to 327 IAC 2-1.3. (BT, AWO)

Response: IDEM has reviewed the draft rule language and made every attempt to eliminate redundancies and extraneous provisions.

Comment: The definition of "antidegradation demonstration application" at 327 IAC 2-1.3-2(1) should add language that clarifies that a significant lowering of water quality must be based on an increase in concentration of a pollutant followed by an increase in pollutant loading. As written, the definition of "antidegradation demonstration application" is inconsistent with the definition of "significant lowering of water quality" at 327 IAC 2-1.3-2(55). (IWQC-IMA)

Response: The term "antidegradation demonstration application" has been eliminated from the revised draft of the rule.

Comment: The definition of "application" at 327 IAC 2-1.3-2(2)(B) is too broad in including a "determination" related to a permit. Only determinations made for requests for a new or increased pollutant loading that causes an increase of a pollutant in the environment should be included in this definition. There are many determinations that IDEM can make on an NPDES permit that covers many non-numeric permit increase limit issues. (IWQC-IMA)

Response: The definition of "application" has been removed from the revised draft of the rule.

Comment: "Best available demonstrated control technology" or "BADCT", defined at 327 IAC 2-1.3-2(3) should mean the highest statutory and regulatory requirements for point sources, including applicable new source performance standards and best management practices for nonpoint source pollutant controls, either of which have been *adequately demonstrated* and which are *reasonably available* to the discharger (similar to limitations existing under the Great Lakes System and Michigan and Ohio law), and which are otherwise *applicable* to the permitted facility as defined by the existing regulatory program. The laundry list of highest statutory and regulatory requirements appearing at

327 IAC 2-1.3-2(3)(C) only serves as fodder for lawsuits. If the requirements are neither adequately demonstrated nor reasonably available, they should not be considered the best available demonstrated technology. Further, the IWQC and IMA are concerned that the highest statutory and regulatory requirements must be applicable to the permitted facility at issue. This may be an otherwise obvious point, but certain groups have argued in the past for the application of requirements for a different industrial source category standard than that applicable to a particular permitted facility; e.g., applying standards for the aluminum industry to resins. Thus, the draft antidegradation rule should be re-written for clarity, to provide certainty to the regulated community that it will not be held to unachievable aspirational standards, and to remove unnecessary additional administrative burden from IDEM. (IWQC- IMA)

Response: The revised draft of the rule proposes a simplified definition for BADCT which removes the permit limits for the categories of wastewater. The proposed definition for BADCT is: "Best available demonstrated control technology or "BADCT" means wastewater treatment capable of meeting the technology-based effluent limit (TBEL) established by the department under 327 IAC 5-5-2 that represents the best cost-effective treatment technology that is readily available**."** IDEM proposes to establish BADCT limits through the development of nonrule policy documents that will be available for public review and comment prior to being used to establish NPDES permit limits and requirements.

Comment: BADCT must be a reasonable standard. The draft rule fails to provide a reasonable standard for BADCT. This problem can be solved by looking at the following U.S. EPA approved Region V programs: Illinois, Michigan, Minnesota, Ohio, Wisconsin and the Great Lakes System, which all indicate that all programs identify the need to apply technology that is reasonably available, currently available, or cost effective. IDEM must follow their example and provide a reasonable BADCT standard. The IUG proposes the following suggested language revision:

> 327 IAC 2-1.3-3(b)(2)(B) The highest statutory and regulatory requirements <u>applicable to the permitted facility</u> for all new and existing point sources <u>which have been adequately demonstrated and which are reasonable available to the discharger are applied.</u>

The same changes need to be reflected in 327 IAC 2-1.3-3(c)(2)(B) and (3)(B). Also, an actual listing within the rule as to what constitutes BADCT is not recommended since such technologies will change with time, rendering the rule readily outdated. (IUG)

Response: The revised draft of the rule proposes a simplified definition for BADCT which removes the permit limits for the categories of wastewater. The proposed definition for BADCT is: "Best available demonstrated control technology or "BADCT" means wastewater treatment capable of meeting the technology-based effluent limit (TBEL) established by the department under 327 IAC 5-5-2 that represents the best cost-effective treatment technology that is readily available**."** IDEM proposes to establish BADCT limits through the development of nonrule policy documents that will be available for public review and comment prior to being used to establish NPDES permit limits and requirements. IDEM believes this revised definition of BADCT provides a reasonable standard.

Comment: The E. coli limits in the definition of BADCT at 327 IAC 2-1.3-2(3)(A)(v) should be deleted. These values are water quality-based limits, not technology based limits. Furthermore, as written, these limits appear to require year-round disinfection, which could lead to a 71% increase in operating costs of disinfection systems. The additional cost for year round disinfection using UV light is estimated to be

$752,719 (5 out 12 months) for all 465 public owned treatment facilities using average costs provided in the table below to meet this BDCAT limitation:

Cost Category	Large Scale UV Average Cost/unit	Small Scale UV Average Cost/unit	Average Cost
Energy	$3300	$35-40	$1668.75
Lamps and Chemicals	$2840	$75-80	$1458.75
Cleaning	$1180		
Maintenance	$1440	$50-100	$757.50
Process control/Labor	$6240		
Testing	$4160		
Total			$3,885.00

Sources: U.S. EPA "Wastewater Technology Fact Sheet Ultraviolet Disinfection," EPA 832-F-99-064, September 1999; U.S. EPA "Onsite Wastewater Treatment Systems Technology Fact Sheet 4, Effluent Disinfection Processes"

Dechlorination tablets	$30-50
Labor	$75-100
Misc. repairs & replacements	$15-25
Analytical support/testing	Not estimated

Operation and maintenance would consist of tablets ($30 to $50 per year), labor ($75 to $100 per year), and miscellaneous repairs and replacements ($15 to $25 per year), in addition to any analytical support required. Installed costs of UV units and associated facilities are $1,000 to $2,000. O/M costs include power ($35 to $40 per year), semiskilled labor ($50 to $100 per year), and lamp replacement ($70 to $80 per year), plus any analytical support. (IWQC- IMA)

Response: The revised draft of the rule proposes a simplified definition for BADCT which removes the permit limits for the categories of wastewater.

Comment: The rule language in the definition of BADCT at 327 IAC 2-1.3-2(3)(B) should be deleted. This language provides no relevant requirements as effluent limitations are developed on a case-by-case basis. (IWQC-IMA)

Response: This language has been deleted from the revised draft of the rule.

Comment: The rule language in the definition of BADCT at 327 IAC 2-1.3-2(3)(C) should be modified to state that a direct discharger subject to categorical guidelines should meet applicable best conventional pollution control technology (BCT),

best available technology economically achievable (BAT), best practicable control technology currently available (BPT), or new source performance standards (NSPS). This change is required because IDEM cannot substantiate that "existing source" discharges can cost-effectively automatically upgrade treatment systems to meet "new source" technology based limitations. For example, in Indiana there are three electrical generating facilities that operate fly ash pond systems that are required to meet BPT, BCT, and BAT limitations. If all three of these facilities became subject to a new requirement or made a change that would require an antidegradation demonstration review, the current definition of "best available demonstrated control technology" (BADCT) would require each of these facilities to convert a wet fly ash pond to a dry system with a landfill. The estimated cost deferential capital costs and annual operating and maintenance costs for these three facilities to upgrade from BAT to NSPS could be as much as $90 million and $84 million, respectively. These costs represent the comparative cost of raising a dam to maintain a wet system and expenses of piping. These figures are based on one company's analysis of converting a system in West Virginia. An EPA database shows seven Indiana companies (six utilities and Alcoa) have 53 ash ponds. The number of ponds is somewhat misleading, for example, one company is listed as having one bottom ash and three fly ash ponds, when the fly ash ponds are actually one large impoundment with three interconnected basins. Nonetheless, there are many fly ash ponds in Indiana. One company obtained a cost estimate to covert from fly ash ponds to a landfill. The cost of conversion was estimated to be $35 million (converting to dry fly ash handling and building Phase I of a landfill). This does not include the costs for closing out the fly ash ponds or doing anything to the bottom of the fly ash ponds. It also does not include the estimated cost ($80 million) for a new wastewater treatment facility to treat other wastewaters currently going to the fly ash ponds. (IWQC-IMA)

Response: This language has been deleted from the revised draft of rule. The revised draft of the rule proposes a simplified definition for BADCT.

Comment: The definition of "CERCLA" identifies the federal statute by providing a code citation (42 U.S.C. 9601 to 9675) and amendment date (October 11, 1996). CERCLA has been amended since October 11, 1996. The draft rule should be updated to reflect more recent amendments. (BT, AWO)

Response: IDEM reviewed the draft rule to ensure proper citation of federal statutes and regulations.

Comment: The definition of "Clean Water Act" or "CWA" identifies the federal statute by providing a code citation (33 U.S.C. 1251 *et seq.*) and amendment date (October 11, 1996). The CWA has been amended since October 11, 1996. The draft rule should be updated to reflect more recent amendments. (BT, AWO)

Response: IDEM reviewed the draft rule to ensure it properly cites federal statutes and regulations.

Comment: The definition of "community" provides that "community" means "a general collective term to describe the varieties of aquatic species and associated organisms living together in a waterbody." That definition applies to the use of the term in several provisions of the rule. However, the definition does not apply to how the term is used in other provisions, such as in the following:

> 327 IAC 2-1.3-6 (b)(15)(E) *Community* housing needs.
> 327 IAC 2-1.3-6 (b)(15)(G) The impact on the *community* tax base.
> (Emphasis added).

In these two sample provisions, “community” refers to the human population in the area in which the proposed activity will take place. To avoid confusion, these two provisions should be revised so that a term other than “community” is used. An appropriate substitute term would be “area in which the receiving waters are located.” (BT, AWO)

Response: The revised draft of the rule does not include a definition of “community”. Where the term “community” is used in the revised draft of the rule, IDEM believes the meaning is clear given the context of when it is used.

Comment: The draft antidegradation rule should not include the term “narrative statements” in the definition of “criterion” at 327 IAC 2-1.3-2(14). Narrative statements are generally subjective conditions (odor or color that produces a nuisance) that have not been explicitly defined and do not lend themselves to the pollutant-by-pollutant antidegradation analyses stated in the rules. (IWQC-IMA, IUG)

Response: US EPA has voiced concern that implementation procedures should address in some manner the need to protect water quality for those substances for which numeric criteria do not exist. In comments submitted by EPA region 7 to Missouri in March 2008, EPA said “EPA… requests that Missouri clarify with its submission that the current definition of “pollutants of concern” is not limited to just those pollutants with numeric criteria, but also includes other pollutants covered by the state’s narrative criteria that have the potential to degrade water quality.” In comments submitted by EPA region 7 to Iowa in June 2008, EPA said “EPA requests that IDNR clarify whether the current definition of “pollutant of concern” is limited to only pollutants with numeric criteria. If so, please explain why the definition excludes other pollutants covered by the state’s narrative criteria that have the potential to degrade water quality….” Therefore, IDEM believes it is important to include narrative criteria in the rule.

Comment: The following is suggested as revision of the definition of “criterion” at 327 IAC 2-1.3-2(14):

> (14) "Criterion" or "Criteria" means a definite numerical value promulgated by the board to maintain or enhance water quality to provide for and fully protect designated uses of the surface waters of the state. (Also, eliminate all references to "value" in the rule as it is undefined. In each instance the term "value" is matched with the term "criteria" or "criterion". The term "value" is incorporated into the definition of "criterion" or "criteria" and its use is unnecessary and creates the question as to what the term is referring to if used in addition to "criteria" or "criterion.")

Response: The revised draft of the rule proposes to delete the term “value” when it is used with “criterion” or “criteria” since the definition of “criterion” incorporates “value”.

Comment: It is unclear why it is necessary to define the term “degradation” as it concerns this rulemaking because the balance of the draft rule sets forth the antidegradation standards and implementation procedures that apply to all waters. Therefore, this term should be removed from the definition. (BT, AWO)

Response: The term is defined because it is an important concept used in the draft rule.

Comment: The definition of “designated uses” at 327 IAC 2-1.3-2(17) should better reflect uses such as drinking water, recreation, warm water aquatic life. One option would be to include a cross-reference in the definition to other rules that already define uses in 327 IAC 2-1-3. (IWQC-IMA)

Response: The revised draft of the rule proposes the following definition:

"Designated uses means those uses specified in the water quality standards at 327 IAC 2-1-3 and 327 IAC 2-1.5-5 for each waterbody whether or not they are being attained."

Comment: The definition of "draft permit" at 327 IAC 2-1.3-2(19) is potentially conflicting and needs to be clarified regarding terminating permits. The definition of "draft permit" states the following: "A notice of intent to terminate a permit and a notice of intent to deny a permit are types of draft permits. A denial of a request for modification, revocation, and reissuance, or termination is not a draft permit. A proposed permit is not a draft permit." It is unclear whether permit terminations are draft permits. (IWQC-IMA)

Response: The revised draft proposes the following definition which is consistent with the definition at 327 IAC 5-1.5-12:

"Draft permit means a document prepared by the commissioner under 327 IAC 5-3-6 before the public comment period indicating the commissioner's tentative decision to:

(A) issue or deny;
(B) modify;
(C) revoke and reissue;
(D) terminate; or
(E) reissue;

a permit.

Comment: The definition of an "outstanding national resource water," at IC 13-11-2-149.5 is not consistent with House Enrolled Act 1162 (PL 78-2009), Section 5, which defines "outstanding national resource water" for purposes of section 50.5 and IC 13-18-3. Specifically, PL 78-2009, Section 5 stated that an "'outstanding national resource water' means a water designated as such by the general assembly after recommendations by the water pollution control board and the environmental quality service council under IC 13-18-3-2(n) and IC 13-18-3-2(o)…," and striking IC 13-18-3-2(p). Instead, the draft antidegradation rule at 327 IAC 2-1.3-2(35) defines "outstanding national resource water" with references IC 13-18-3-2(o) and IC 13-18-3-2(p). The definition of "outstanding national resource water" fails to include IC 13-18-3-2(n) and wrongly includes IC 13-18-3-2(p). (IWQC-IMA)

Response: The revised draft of the rule mirrors the correct statutory language for the definition of an outstanding national resource water.

Comment: The definition of "outstanding national resource water" (ONRW) at 327 IAC 2-1.3-2 (35)(C) creates an unclear boundary of where this special designation applies. It appears that the language in the definition can unknowingly add any water to an ONRW, if it is "reasonably necessary for the protection of other waterbodies designated as ONRWs." It is also unclear as to whether this language follows Indiana statutory considerations regarding the designation of ONRWs. (IWQC-IMA)

Response: The rule language accurately reflects the statutory scheme for defining and creating ONRWs. The language does allow the designation of a water as an ONRW if it reasonably necessary for the protection of other ONRWs, and mirrors the language of IC 13-11-2-149.5.

Comment: The definition at 327 IAC 2-1.3-2(38) for a "permit" should be clarified. The draft rule language defines a "permit" as a "permit" in 2-1.3-2(38)(A). IDEM should consider whether a definition used in 327 IAC 5-1.5-39 should considered. (IWQC-IMA)

Response: The definition mirrors the statutory definition of "permit" at IC 13-11-2-157.

Comment: At 327 IAC 2-1.3-2(43), IDEM defined "pollutant of concern" to mean "a pollutant that is reasonably expected to be present in: (A) a discharge based on the source and nature of the discharge; and (B) the receiving water in sufficient amounts to have a potentially detrimental affect on the designated or existing uses of the receiving water." Many have suggested that this definition should be revised so that the permittees know exactly which parameters are "pollutants of concern" because the definition of a "pollutant of concern" as simply meaning a "pollutant" is unconstitutionally vague, fails to provide fair notice of which substances were prohibited, and could lead to arbitrary and capricious enforcement.[4/] As a further background information, Ohio's antidegradation rules define a "regulated pollutant" as meaning "any parameter for which water quality criteria have been adopted in, or developed pursuant to, Chapter 3745-1 of the Administrative Code, with the exception of biological criteria, and any other parameter limited in a national pollutant discharge elimination system permit as a result of new source performance standards, best conventional pollutant control technology, best available technology economically achievable or best practical control technology currently available for the appropriate categorical guidelines of 40 C.F.R." See Ohio Admin. Rule 3745-1-05(A)(21), (2001). Indiana could consider adopting a similar provision. The following is suggested as revision to the definition of the term "pollutant of concern":

> (43) "pollutant of concern" means a pollutant that is identified as a toxic under Section 307(a)(1) of the CWA that has an applicable water quality criterion and that is reasonably expected to be present in: (A) a discharge based on the source and nature of the discharge; and (B) the receiving water in sufficient amounts to have a potentially detrimental effect on the designated or existing uses of the receiving water.

This modification would achieve the regulatory purpose in a less restrictive manner and be easily understood by IDEM and the regulated community. (IWQC-IMA, IUG)

Response: The revised draft of the rule proposes that the term "pollutant of concern" be replaced with the term "regulated pollutant". The definition of regulated pollutant should address the concerns stated in the comment.

Comment: A "pollutant of concern" should be limited to a pollutant that is: (1) regulated as a water quality standard; (2) a water quality-based effluent limit; (3) a regulated BCC; (4) a regulated toxic substance: or (5) regulated within a Best Management Practice. Federal regulations are clear that states must adopt water quality criteria that protect the designated use. Federal regulations do not require that every possible substance must be regulated. (ICC, IUG)

Response: The revised draft of the rule proposes that the term "pollutant of concern" be replaced with the term "regulated pollutant". The definition of regulated pollutant should address the concerns stated in the comment.

[4/] In addition to the prohibitions identified as unconstitutional in *Brown* and *Healthscript* (*see supra*, p. 4, Section 2), the Indiana Supreme Court and other Indiana courts have repeatedly and uniformly rejected pollution exclusions in insurance policies as ambiguous and unenforceable for well over a decade. *See, e.g., American States Ins. Co. v. Kiger,* 662 N.E.2d 945, 947-49 (Ind. 1996); *Seymour Mfg. Co. v. Commercial Union Ins. Co.,* 665 N.E.2d 891, 892 (Ind. 1996); *Freidline v. Shelby Ins. Co.,* 774 N.E.2d 37, 40 (Ind. 2002), *summarily affirming* 739 N.E.2d 178, 184 (Ind. Ct. App. 2000); *The Travelers Indem. Co. v. Summit Corp. of America,* 715 N.E.2d 926, 934-35 (Ind. Ct. App. 1999); *Governmental Interins. Exchange v. City of Angola,* 8 F.Supp.2d 1120, 1128 (N.D. Ind. 1998).

Comment: The draft rule's definition of "pollutant of concern" is acceptable for pollutants that are reasonably expected to be present in a discharge based on the source and nature of the discharge. However, it is inappropriate to expand the definition to include pollutants contained in receiving waters that are beyond the control of a regulated facility. Atmospheric deposition of pollutants in receiving waters is an example of pollutants beyond the control of a regulated facility. (ISEG, NIF)

Response: The revised draft of the rule proposes that the term "pollutant of concern" be replaced with the term "regulated pollutant". The definition of regulated pollutant should address the concerns stated in the comment.

Comment: The definition of "RCRA" identifies the federal statute by providing a code citation (42 U.S.C. 6901 to 6992k) and amendment date (October 19, 1996). RCRA was not amended on October 19, 1996; it was amended on March 23, 1996. The draft rule should be updated to reflect the correct date and any more recent amendments. (BT, AWO)

Response: IDEM reviewed the draft rule to ensure it properly cites federal statutes and regulations.

Comment: The definition of "threatened or endangered species" includes species listed pursuant to the federal Endangered Species Act, as well as the following Indiana listings:

> (B) Species listed as state threatened or endangered by the Indiana department of natural resources under IC 14-22-34;
>
> (C) Species designated as state threatened or endangered species in the January 22, 1997, database for endangered, threatened, rare and special concern species maintained by the Indiana natural heritage data center, division of nature preserves, department of natural resources.

The antidegradation rule should not contain any special provisions concerning federal or state threatened or endangered species. Such treatment is unnecessary and inappropriate because protection of threatened and endangered species already is taken into consideration in the adoption of water quality criteria and in permitting actions. Therefore, the definition of threatened and endangered species should be deleted. In addition, only the federal listings have been properly adopted after notice and comment. Species that are listed only on an informal or internal agency list, such as the database maintained by the Indiana Natural Heritage Data Center, have not been subjected to the full array of public participation procedures, which is necessary before they can serve as the basis for enforceable permit requirements. (BT, AWO)

Response: IDEM believes it is appropriate to consider impacts on both federal and state listed threatened and endangered species.

Comment: The definition of "Tier I criteria" references the procedures in 327 IAC 2-1-8.2 for waters outside of the Great Lakes system. However, Method 3 in that rule provision is actually a Tier II value equivalent method. Thus, the definition should be revised to make clear that it only applies to Methods 1 and 2 in 327 IAC 2-1-8.2.(BT, AWO)

Response: The revised draft of the rule no longer uses this term, so it has been deleted from the definitions.

Comment: The definition of "Tier II values" should be deleted from the draft rule because antidegradation requirements should not be applied to Tier II values as is explained in detail later in these comments. (BT, AWO)

Response: The revised draft of the rule no longer uses this term, so it has been deleted from the definitions.

Comment: The definition of "toxic substances" at 327 IAC 2-1.3-2(60) should be narrowed to mean those toxic substances specifically regulated by IDEM. Constitutional due process requires "fair notice" of the prohibited conduct, which in turn provides for ease of comprehension and practical enforcement.[1/] Pursuant to fair notice, the term "toxic substances" should be narrowed to mean those toxic substances identified as toxic under Section 307(a)(1) of the CWA rather than simply "substances that ... may become harmful to aquatic life, humans, other animals, plants, or food chains."[2/] This would be consistent with the federal antidegradation regulations, which similarly identify "toxic pollutants" as "those pollutants listed by the Administrator under section 307(a) of the Act." 40 CFR 131.3(d). In the Sixteenth Century, Paracelcius coined the phrase "the dose makes the poison," which implies that all chemical agents are intrinsically toxic and whether they cause harm is only a question of dose.[3/] The term "toxic substances" as defined may be invalidated on vagueness grounds because it does not provide fair notice of which substances are "toxic substances" governed by the draft antidegradation rule. Industry must be able to ascertain which substances are subject to the antidegradation rules. Accordingly, 327 IAC 2-1.3-2(60), which defines "toxic substances," should be amended so that toxic substances is defined as "those substances identified as toxic under Section 307(a)(1) of the CWA." (IWQC-IMA, IUG)

Response: Because science and technology continue to advance, often at a pace faster than regulatory changes can be made, IDEM maintains the authority to regulate toxic substances not currently listed under section 307 A(1) of the CWA.

Comment: The definition of "whole effluent toxicity" provides that it means the "aggregate toxic effect of an effluent measured directly by a toxicity test." This definition should be clearly linked to toxicity test methods in the 40 C.F.R. Part 136 methodologies so that the definition is not so broad as to include toxicity tests that are more specific to the testing of pure chemicals in support of assessing generational impacts. Only the 40 C.F.R. Part 136 methodologies generate data that properly may be interpreted in the context of a wastewater discharge and receiving water ecosystem. The definition should be revised as follows:

> "Whole effluent toxicity" means the aggregate toxic effect of an effluent measured directly by a toxicity test <u>performed in accordance with approved methodologies under 40 C.F.R. Part 136.</u>

(BT, AWO)

Response: The proposed language was incorporated into the revised draft of the rule.

Comment: Throughout 327 IAC 2-1.3, the word "value" follows the term "water quality criteria" or "water quality criterion." The word "value" is undefined, vague, and meaningless, and it will lead to confusion. The term should be removed. (IWQC-IMA)

Response: The revised draft of the rule proposes to delete the term "value" when it

---

[1/] *Healthscript, Inc. v. State*, 770 N.E.2d 810, 815-816 (Ind. 2002).

[2/] Antidegradation Rules, p. 29, 327 IAC 2-1.3-2(61).

[3/] Bernard D. Goldstein and Mary Sue Henifin, *Reference Guide on Toxicology*, Reference Manual on Scientific Evidence, Second Edition, p. 403 (2000).

is used with “criterion” or “criteria” since the definition of “criterion” incorporates “value”.

Air pollution control technology and ground water remediation activities

Comment: The IWQC and IMA support IDEM’s response to comments that projects which require air pollution control technology that generate wastewater under the Clean Air Act and groundwater remediation projects are activities that should not be required to undergo a full antidegradation review with a detailed demonstration of necessity and socio-economic benefit. The IWQC and IMA support IDEM efforts to reduce the burden for situations that are clearly beneficial to a community or the environment. (IWQC-IMA)

Response: The revised draft of the rule proposes some level of an antidegradation demonstration be completed for all discharges that constitute a significant lowering of water quality. Ground water remediation projects will have to provide some basic information about the nature and location of the discharges and information about why the discharge is necessary. Air pollution controls that generate discharges to surface water will have to provide some basic information about the nature and location of the discharges and information about why the discharge is necessary and discharge alternative analysis. The proposal does not require a social and economic analysis for either ground water remediation projects or air pollution controls.

Comment: Air pollution control equipment, designed to meet state and federal air regulatory requirements, that impacts water quality should be deemed to meet the important social factors test. In order to accomplish this objective, it is suggested that IDEM remove from the exemptions language the provision found at 327 IAC 2-1.3-4(b)(4)(C) because the regulated community is not seeking an exemption from antidegradation review of the water quality impacts assessment related to the installation of air pollution control equipment. Instead the regulated community is seeking a determination, by rule, of only one portion of the antidegradation demonstration which concerns economic and social importance. The regulated community is not seeking avoidance of the water quality analysis required under the antidegradation program. The following is suggested rule language for 327 IAC 2-1.3-6(c):

(c) In determining whether a proposed discharge is necessary to accommodate important economic or social development in the area in which the waters are located under antidegradation standards and implementation procedures, the commissioner:

(1) must give substantial weight to any applicable determinations by governmental entities; and

(2) may rely on consideration of any one (1) or a combination of the factors listed in subsection (b)(15); and

(3) must consider as important economic and social development any new or increased loading necessary to accomplish a reduction of a regulated air pollutant in which all reasonable methods for minimizing or preventing the new or increased loading have been taken.

(IUG)

Response: The revised draft of the rule proposes some level of an antidegradation demonstration be completed for all discharges that constitute a significant lowering of water quality. Air pollution controls that generate discharges to surface water will have to

provide some basic information about the nature and location of the discharges and information about why the discharge is necessary and discharge alternative analysis. The proposal does not require a social and economic analysis for air pollution controls.

Tributaries to OSRWs

Comment: Language in the draft rule at 327 IAC 2-1.3-3(c) concerning treatment of tributaries in the antidegradation standard is objectionable because the rule language inappropriately designates many additional waters as OSRWs. (ISEG)

Response: The revised draft of the rule deletes the definition of "tributary of an OSRW" and the language formerly found in 327 IAC 2-1.3-3(c) that said "as well as the portions of waters upstream of an OSRW that impact the water quality of the OSRW" because the definition and language do not clearly delineate "upstream segments" or "portions of water upstream". Designated OSRWs are clearly delineated and IDEM believes applying the antidegradation standards and implementation procedures to the OSRWs provides a clear standard.

316(a) and variances

Comment: The provision in the draft rule at 327 IAC 2-1.3-3(e) concerning alternative thermal effluent limitations pursuant to Section 316(a) of the CWA should be applied to all waters. The draft rule provision states that it specifically does not apply to ONRWs. There is no reason for limiting this provision to waters other than ONRWs. This provision is based upon the federal antidegradation regulation in 40 CFR. 131.12(a)(4), which is not limited in application to waters that are not specially designated waters. Currently, there are no ONRWs in Indiana, which is a further reason to delete this exclusion. It is unclear how IDEM would implement antidegradation review in cases in which it decides to provide alternative effluent limitations. Section 316(a) allows permitting authorities to issue alternative thermal effluent limitations upon a demonstration that such limitations will "assure the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in and on that body of water." This process results in thermal limits that are based on an evaluation of the aquatic life designated use, rather than limits based upon the numeric criteria for temperature. Therefore, the antidegradation implementation procedures set forth in the draft rule would not be applicable to alternative effluent limitations. The draft rule provision should be revised so that it applies to all waters. In addition, the response to first notice comments contained in the second notice indicates that the process for granting 316(a) variances does not satisfy antidegradation requirements. This is inconsistent with the draft rule at 327 IAC 2-1.3-3(e), and should be revised. (BT, AWO)

Response: As stated in the antidegradation standards at 327 IAC 2-1.3-3(d), ONRWs should be maintained and protected in their present high quality without degradation except for short-term, temporary discharges. This includes protection from degradation by thermal discharges.

Comment: An antidegradation demonstration should not be required when a new 316(a) variance is granted to a discharger. CWA 316(a) variances are simply not subject to antidegradation review under the law. The draft antidegradation rule must, as a matter of law, recognize that CWA Section 316(a) takes precedence over antidegradation review. IDEM's response to comment at first comment period incorrectly states that, "The 316(a) variance does not include a review of alternatives that would eliminate or reduce the need or the effluent limits that exceed the WQBELs for temperature." The Water Quality Standards Handbook, Second

Edition, Chapter 4.2, states as follows:

> The requirement for potential water quality impairment associated with thermal discharges contained in section 131.12(a)(4) of the regulation is intended to coordinate the requirements and procedures of the antidegradation policy with those established in the Act for setting thermal discharge limitations. Regulations implementing section 316 may be found at 40 CFR 124.66. The statutory scheme and legislative history indicate that limitations developed under section 316 take precedence over other requirements of the Act.

Further, 33 U.S.C. 1326(a) provides:

> (a) Effluent limitations that will assure protection and propagation of balanced, indigenous population of shellfish, fish, and wildlife. With respect to any point source otherwise subject to the provisions of section 1311 of this title or section 1316 of this title, whenever the owner or operator of any such source, after opportunity for public hearing, can demonstrate to the satisfaction of the Administrator (or, if appropriate, the State) that any effluent limitation proposed for the control of the thermal component of any discharge from such source will require effluent limitations more stringent than necessary to assure the projection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water into which the discharge is to be made, the Administrator (or, if appropriate, the State) may impose an effluent limitation under such sections for such plant, with respect to the thermal component of such discharge (taking into account the interaction of such thermal component with other pollutants), that will assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on that body of water.

(IWQC-IMA, ISEG, NIF, NIPSCO, IUG)

Response: IDEM agrees that 316(a) variances should not be subject to antidegradation review as allowed 40 CFR §131.12 (a) (4): "In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act."

Comment: The draft rule should be revised to provide that antidegradation review is not required for agency-approved variances. All variance applications must include a review of both the types of technology capable of treating the pollutant of concern and the social and economic costs of installing and operating each type of technology. This review is very similar to the technology review and demonstration of social or economic importance that is required for antidegradation review. The U.S. EPA recommends that States use the same process for reviewing social and economic impacts for variances and antidegradation review. (See Interim Economic Guidance for Water Quality Standards Workbook, EPA 823/B-95-002 (March 1, 1995).) Thus, if IDEM has granted a variance to a discharger, it makes sense that the discharger should not also need to complete an antidegradation demonstration. A 316(a) demonstration affirmatively satisfies antidegradation requirements; thus, no additional review beyond the demonstration that the party already has obtained the variance should be required. (BT, AWO, ISEG, NIF, NIPSCO)

Response: 316(a) variances should not be subject to antidegradation review, but variances other than 316(a), will be subject to antidegradation review. However, if the support documentation for a variance provides the information needed for an adequate antidegradation demonstration, then no further justification should be required.

Demonstration requirement for exemptions should be eliminated

Comment: Exemptions that are not a "significant lowering of water quality" should not be required to be submitted to IDEM for approval. The IWQC and IMA are fundamentally opposed to activities that are not a "significant lowering of water quality" to be approved by IDEM. (IWQC-IMA)

Response: The draft rule does not require submissions beyond what is required to comply with an existing permit if the exemption does not result in a significant lowering of water quality.

Comment: ISEG supports the inclusion of appropriate exemptions for properly applied wastewater treatment chemicals that are used to achieve NPDES discharge compliance. (ISEG)

Response: The revised draft of the rule proposes, since wastewater treatment chemicals can cause a lowering of water quality, that discharges of these chemicals undergo a limited antidegradation demonstration.

Comment: The draft rule's antidegradation demonstration requirement for exemptions is excessively burdensome and beyond what is necessary to achieve the regulatory objective. Antidegradation exemption demonstrations are generally designed to determine whether an action proposed by the discharger that will result in a significant lowering of water quality is both necessary and will support important social and economic development. The antidegradation draft rule's demonstration application section for exemptions requires an exhaustive amount of extremely detailed information. Once that information is submitted, the commissioner must determine whether the application for the exemption is complete. When the application is deemed complete, the commissioner shall determine whether to approve or deny the request. The rule should include some efficiencies for exemptions based upon the thorough preliminary determination that the exemption fits within the antidegradation goals, as opposed to during the exemption applicability process after the rule is finalized. (IUG)

Response: The concept of the exemption justification has been removed from the revised draft of the rule. The revised draft requires some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit.

Comment: The requirement to submit demonstration information for exemptions under 327 IAC 2-1.3-4(b)(3) should be eliminated. IDEM's antidegradation demonstration does not achieve the regulatory goal in the least restrictive manner. Activities requiring the submission of an antidegradation demonstration are identified at 327 IAC 2-1.3-4(b)(3)(A) - (F), which require an antidegradation demonstration complying with 327 IAC 2-1.3-6, and 327 IAC 2-1.3-4(b)(4)(A) - (D), which require the submission of an exemption justification according to 327 IAC 2-1.3-5. The antidegradation demonstration application at 327 IAC 2-1.3-6 is very onerous (for example, if a person remediates VOC-impacted groundwater, the remediated water must meet the 5 ppb maximum contaminant level similarly required under the Safe Drinking Water Act. Water that is otherwise safe by regulatory drinking water standards should not have to undergo an antidegradation exemption demonstration.) Antidegradation demonstrations should permit IDEM to fairly quickly determine whether or not the action proposed by the discharger that will result in a significant lowering of water quality is both necessary and will support important social and economic development. (SID, p. 203-204, Ch. VII (A)(1)) By comparison, the Great Lakes Water Quality Antidegradation Policy antidegradation demonstration seeks limited information:

(1) An analysis of cost-effective pollution prevention alternatives and techniques available to the entity to eliminate or significantly reduce the extent to which the increased loading results in a lowering of water quality;
(2) An analysis of alternative or enhanced treatment techniques available;
(3) An analysis of important social or economic development and benefits foregone if the lowering of water quality is not allowed; and
(4) Making special provision for remedial actions under CERCLA, RCRA, and similar actions pursuant to federal or state law. (Appendix E to 40 CFR 132, Great Lakes Water Quality Initiative Antidegradation Policy, III. Antidegradation Demonstration.) (IWQC-IMA)

Response: The concept of the exemption justification has been removed from the revised draft of the rule. The revised draft requires some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit. Antidegradation demonstrations will require the discharger to sufficiently demonstrate that all reasonable methods for minimizing or preventing the new or increased loading have been taken.

Comment: In response to public comments that more detailed guidance was needed on all aspects of the demonstration, U.S. EPA responded that it "was convinced that it is not possible to write guidance that would cover adequately every possible situation. In addition, including greater detail would hinder efforts by ... states to adapt the final Guidance to existing regulatory structures and thereby slow its ability to respond to requests to lower water quality." (SID, pp. 219-220.) No other state in Region 5 requires such onerous demonstration requirements. EPA's final Guidance requires dischargers to identify "cost-effective" pollution prevention alternatives to eliminate or greatly reduce the extent of significant lowering of water quality. (SID, p. 220.) To that end, EPA agreed to use a ten percent additional cost benchmark as guidance as the easiest measure of affordability to implement available treatment options. (SID, p. 220.) IDEM's proposed Antidegradation Rules contain no similar ten percent additional cost benchmark threshold to identify cost-effective pollution prevention alternatives. (Antidegradation Rules, p. 35, 327 IAC 2-1.3-6(b)(11) examines "the cost of the water pollution controls associated with the proposed activity, and (b)(12) examines "the availability, reliability, cost-effectiveness, and technical feasibility of … degradation mitigation techniques and alternatives.") Accordingly, the antidegradation draft rule should simplify this process and follow EPA's guide of "using a ten percent increase in treatment costs as a benchmark for determining whether or not alternative or enhanced treatment options identified through this analysis were affordable." (SID, p. 223.) Allowing for a benchmark guide of ten percent additional cost to determine cost-effective pollution prevention alternatives would meet the rulemaking requirements under IC 4-22-2-19.5(a) of minimizing expenses to regulated entities required to comply with the rules, achieving the regulatory goal in the least restrictive manner, avoiding duplication of existing standards in other state and federal laws, improving ease of comprehension, and allowing for practical enforcement. (IWQC-IMA)

Response: The ten percent additional cost benchmark was included in the Great Lakes Initiative (GLI) Supplementary Information Document (SID) as guidance only. IDEM believes a more comprehensive review of a number of factors is appropriate for an adequate antidegradation demonstration and the application of a rigid threshold may not accurately represent the costs and

benefits of a proposed discharge. The specific language from the GLI, SID response to comments is:

> "Comment: Several commenters stated that the ten percent mandatory expenditure requirement for enhanced and/or alternate treatment is arbitrary.
> Response: EPA agrees that the ten percent mandatory expenditure requirement may limit the ability of States and Tribes to consider individual circumstances in reviewing antidegradation demonstrations. As a result, the ten percent additional cost benchmark is included in this document as guidance only. EPA realizes that the determination of what represents affordable treatment options is specific to the case in question. Therefore, a strict cut-off at ten percent additional costs is not realistic. Greater costs may be affordable in some cases; in others, ten percent may be too expensive. In the final Guidance, the determination of what treatment alternatives are practicable is left to Tribes and States. EPA is developing additional National guidance on a variety of issues related to economic considerations in water quality standards that will provide direction to Tribes and States as they implement their antidegradation policies. It is important to note that the affordability measures discussed above are separate and distinct from any determination of penalties or ability to pay within the context of an enforcement action." See page 401 of the PDF at the following link: http://www.epa.gov/gli05u03/docs/usepa_sid.pdf

Support for de minimis exemptions

Comment: The draft rule goes beyond assuring that the discharges are safe by requiring review of changes in water quality that may result from increased or new discharges, even though those changes would not cause any violation of water quality standards. Antidegradation review imposes significant additional costs on members of the regulated community and ultimately on their customers. Those costs are principally the additional time and expense involved in complying with the antidegradation requirements. Where the effect of a new or increased discharge on the environment is insignificant (for example, is less than the de minimis threshold), there is no benefit to requiring this commitment of time and money by the public, the regulated community, and government agencies. Requiring extensive review of insignificant or inconsequential discharges that clearly will remain below the water quality standards is punitive to industry without offering any meaningful added protection to human health or the environment. (BT, AWO, IWQC-IMA, IUG)

Response: The draft rule is required to implement federal law. The federal antidegradation regulatory policy is designed to prevent deterioration of existing levels of good water quality. EPA policy and state statute allow for the consideration of exempting de minimis discharges from antidegradation demonstration requirements. However, it is incumbent on IDEM in allowing the de minimis exemption, to ensure the discharge truly is de minimis.

Comment: Senate Enrolled Act 431 (2000) (SEA 431) requires the WPCB to adopt a rule for OSRWs that includes a de minimis quantity of additional pollutant load for which a new or increased permit limit is required and below which antidegradation procedures do not apply. This de minimis concept should be extended to all high quality waters. (BT, AWO, IWQC-IMA)

Response: The proposed de minimis exemption is applicable to all high quality waters including OSRWs.

Comment: SEA 431 addressed, among other things, antidegradation implementation procedures for OSRWs. In particular, it amended IC 13-18-3-2 to require the Board to adopt

antidegradation implementation procedures that include the following:

> (l)…(1) A definition of significant lowering of water quality that includes a de minimis quantity of additional pollutant load;
>
> (A) for which a new or increased permit is required; and
>
> (B) below which antidegradation implementation procedures do not apply.

This statutory language unambiguously requires a de minimis level for OSRWs. This de minimis level is triggered when a discharger needs a new or increased permit limit. If the new or increased discharge is below the de minimis level, the antidegradation implementation procedures do not apply to the discharge. Although the provisions of SEA 431 do not expressly apply to high quality waters that are not designated as OSRWs, it only makes sense to extend the de minimis concept in SEA 431 to all high quality waters; otherwise, the antidegradation implementation procedures for regular high quality waters would be more stringent than the requirements for OSRWs. (BT, AWO, IWQC-IMA, ISEG)

Response: The proposed de minimis exemption is applicable to all high quality waters including OSRWs.

Comment: The draft antidegradation rule does not achieve the regulatory goal in the least restrictive manner. EPA adopted the de minimis test because it "recognize[d] that certain activities, although they may result in some lowering of water quality, will not lower water quality to such an extent as to result in a significant lowering of water quality. EPA's goal in allowing states ... to identify certain increases as de minimis was to provide a means of *reducing the administrative burden on all parties associated with activities of little or no consequence to the environment*." (SID, p. 208, Ch. VII (C)(2)(a)(i) (emphasis added)) This in turn allows states to focus their resources where they may result in the greatest environmental protection. (Memorandum regarding Tier 2 Antidegradation Reviews and Significant Thresholds, Ephraim S. King, Director Office of Science and Technology, EPA, (August 10, 2005) (hereinafter, the "King Memo"), p. 2.) "EPA has afforded the states ... some discretion in determining what constitutes a significant lowering of water quality. U.S. EPA's final water quality guidance for the Great Lakes system provided antidegradation implementation procedures for bioaccumulative chemicals of concern ("BCCs") only. These procedures do not include a de minimis level. However, in the Supplementary Information Document (SID) for the Great Lakes rules, U.S. EPA specifically stated that "[f]or non-BCCs, States and Tribes may include de minimis provisions in their antidegradation policy….De minimis provisions provide a means for States and Tribes to differentiate between actions that will likely result in an increased loading of a pollutant to a receiving water that is likely to have a significant impact on water quality and those that are unlikely to do so and focus review efforts on actions that will degrade water quality. It is reasonable to assume the loading increases of non-BCCs that will use less than ten percent of the remaining assimilative capacity in a waterbody will have a negligible effect on ambient water quality." (See SID at 208.) In addition, in an August 10, 1995, U.S. EPA Memorandum entitled, "Tier 2 Antidegradation Reviews and Significance Thresholds" (1995 Memorandum), U.S. EPA recognized that it has afforded the states and tribes some discretion in determining what constitutes a significant lowering of water quality, and has accepted a range of approaches to defining a "significance threshold" over which full antidegradation review is required:

> This issue was considered at great length in the process of developing the Water Quality Guidance for the Great Lakes. Relying upon input offered during a four-year open public process involving environmental groups, industry representatives, and other experts, with numerous opportunities for public input, the directors of the Great Lakes states and EPA technical experts reached consensus on a significance threshold of ten percent (10%) of

the available assimilative capacity, coupled with a cumulative cap. They determined that this threshold represented a reasonable balance between the need of the regulatory agencies to limit the number of actions involving non-BCCs (bioaccumulative chemicals of concern) that are subject to the detailed antidegradation demonstration requirements, and the need to protect and maintain water quality. They believed that any individual decision to lower water quality for non-BCCs that is limited to 10 percent of the available assimilative capacity represents minimal risk to the receiving water and is fully consistent with the objectives and goals of the CWA. A ten percent (10%) value is well within the range of values for significance thresholds that EPA has approved in other states as well. EPA considers this approach to be workable and protective in identifying those significant lowerings of water quality that should receive full tier 2 antidegradation review…." (*See* 1995 Memorandum at 2.)

IDEM's current antidegradation implementation procedures for high quality waters in the Great Lakes system provide a de minimis of ten percent of unused loading capacity, as long as at least ten percent of total loading capacity remains unused. (See 327 IAC 5-2-11.3(b)(1)(B)(ii)(AA)) Other states provide a similar de minimis exemption. Based on U.S. EPA guidance and other state regulations, the draft rule should allow de minimis increases of less than ten percent of total loading capacity to both high quality waters and OSRWs. (BT, AWO, IWQC-IMA, ISEG, NIF, NIPSCO)

Response: The draft rule has been revised to reflect a de minimis threshold that is of 10% or less (preserving 90%) of the existing available loading capacity determined at the time of the specific proposed new or increased loading of the regulated pollutant for all high quality waters, including OSRWs.

Comment: At 327 IAC 2-1.3-4(b)(1)(B)(i), the draft rule should reinstate a ten percent unused loading capacity (or higher) threshold for determining what a "significant lowering of water quality" is for high quality waters (HQWs) that are OSRWs. The draft rule should use the definition of "final acute value" found at 327 IAC 2-1.3-2(23)(A) and (B) to scientifically defend a ten percent (or higher) unused loading capacity for all waters and lend credibility to the decisions that this process will protect water quality and not incrementally allow deterioration of water quality. This type of information will stop the belief that the credibility of a state's antidegradation implementation procedures is strained and the environment and drinking water supplies are not maintained. Given IDEM's approach, it would be logical and practical to assume that use of ten percent unused loading capacity protects most likely 99.5% of species, and that use of 33% unused loading capacity (like Wisconsin) would most likely protect 98.3% of species. Arbitrarily assuming ten percent of something being "significant" has no meaning unless it can be directly tied to a tangible outcome (99.5% or species are protected). IDEM should also adjust any benchmark unused loading capacity values in 327 IAC 2-1.3-4(b)(1)(A)(i)(DD) and (b)(1)(B)(i)(DD) to higher levels (for example, 50% of the unused loading capacity, which provides the estimated number of species protected to be at 97.5% or more). This analysis also includes 7Q10 low flow values, which with other inherent safety factors built into the analysis, likely severely underestimates the protection afforded. (IWQC-IMA)

Response: The draft rule has been revised to reflect a de minimis threshold that is of 10% or less (preserving 90%) of the existing available loading capacity determined at the time of the specific proposed new or increased loading of the regulated pollutant for all high quality waters, including OSRWs.

Comment: Notwithstanding the Great Lakes System ten percent de minimis test, EPA has approved Wisconsin's de minimis test, which is more easily understood by regulators and the

regulated community and achieves its purpose in a way that minimizes the expense to the regulated entities required to comply with the rule. Wisconsin's de minimis test provides that degradation is considered significant and subject to antidegradation review if the proposed new or increased discharge, along with all other new or increased discharges, taking into account any changes in assimilative capacity over time, results in an expected level greater than one-third of the assimilative capacity for any indicator parameter other than dissolved oxygen. (NR 207.05(4)) IDEM's draft antidegradation rule, by comparison, is more limited. Degradation is considered de minimis for a high quality water that is not an OSRW where the proposed net increase in the loading of a pollutant of concern is less than or equal to ten percent of the existing unused loading capacity for Tier 1 and 20 percent of the existing unused loading capacity for Tier II. (Antidegradation Rules, pp. 32-33. 327 IAC 2-1.3-4(b)(1)(A)(i)) Further, the benchmark unused loading capacity is 75% of the unused loading capacity established at the time of the permit issuance. (Antidegradation Rules, p. 32, 327 IAC 2-1.3-4(b)(1)(A)(i)(DD)) Degradation is considered de minimis for a high quality water that is an outstanding state resource water outside the Great Lakes basin of a non-BCC toxic substance, where the proposed net increase in the loading greater than one percent of the existing unused loading capacity for Tier I or two percent of the unused loading capacity for Tier II, where the benchmark unused loading capacity is 97.5% of the unused loading capacity established at the time of the permit issuance. (Antidegradation Rules, p. 32, 327 IAC 2-1.3-4(b)(1)(B)) The preferred de minimis test would be that of Wisconsin for high quality waters that are not OSRWs, which EPA Region 5 has approved. (IWQC-IMA, IUG)

Response: IDEM is aware of Wisconsin's de minimis threshold, which was adopted in 1988. In recent years EPA does not appear to have approved any similar de minimis exclusions for other states. IDEM believes that there would likely be issues with EPA approval of Wisconsin's 33 % de minimis threshold if it were adopted currently in Indiana. IDEM has not received information as requested substantiating any serious burden on regulated entities if the de minimis threshold were established at 10% or less of the existing available loading capacity determined at the time of the specific proposed new or increased loading, as proposed in the revised draft rule.

Comment: The ten percent de minimus threshold was originally established with the intent of protecting the Great Lakes. Therefore, ten percent should be the starting point for the OSRW designation in Indiana and the other so designated high quality waters should have a de minimis threshold that is significantly higher like Wisconsin. In a recent Petition for Corrective Action, some have argued that allowing for de minimis discharges might not be appropriate at all. This position is clearly belied by the Supreme Court and D.C. Circuit Court opinions (*supra*, pp. 4-6, Section 2) concerning the doctrines of "absurd results" and "administrative necessity." The federal antidegradation regulations only require the state to adopt water quality criteria containing "sufficient parameters or constituents to protect designated uses." 40 CFR 131.11(a)(1). "When these criteria are met, water quality will generally protect the designated use." 40 CFR 131.3(b). (IWQC-IMA, ISEG)

***Response*:** The draft rule has been revised to reflect a de minimis threshold that is of 10% or less (preserving 90%) of the existing available loading capacity determined at the time of the specific proposed new or increased loading of the regulated pollutant for all high quality waters, including OSRWs.

Comment: The exemption at 327 IAC 2-1.3-4(b)(3)(F) regarding a new or increased loading of an approved non-BCC water treatment additives is appropriate. However, given the exact language in 327 IAC 3-1.3-4(b)(3)(F), clarification is needed that dischargers are still

eligible to change water treatment additives as long as they are approved under the conditions of an NPDES permit (for example, prior approval by IDEM) conditions. (IWQC-IMA)

Response: The revised draft requires some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. The use of a new water treatment additive will require the discharger to provide some basic discharger information and information that sufficiently demonstrates that all reasonable methods for minimizing or preventing the new or increased loading have been taken.

Comment: The draft rule needs clarity with respect to the procedures to be used to calculate the TLC for both rivers and lakes. The question for de minimis evaluation is: what happens when an alternate mixing zone has not been implemented in an OSWR lake? Typically the TLC has been determined as the product of a chronic criterion and 7Q10 river flow (using appropriate conversion factors). This approach is suitable for streams with appreciable flow, that is, a 7Q10 greater than zero. However, for a lake discharger, there is no "stream design flow", and the TLC may be determined from the chronic criterion times the effluent flow, thereby effectively negating the de minimis exemption. Additional total loading capacity for lake would only exist if an alternate mixing zone is granted. (NIPSCO)

Response: A discharge to a lake that does not have an approved alternate mixing zone does not have any available loading capacity.

De minimis/cumulative cap provisions

Comment: The draft rule includes de minimis/cumulative cap provisions for high quality waters that are significantly different from the current provisions in the implementation procedures for the Great Lakes system, 327 IAC 5-2-11.3 (current rule). The current rule defines the de minimis/cumulative cap based upon unused loading capacity and total loading capacity. Specifically, if as a result of a deliberate activity, a discharger requests a new permit limit or modified permit limit, and the increased limit (as mass) is less than ten percent of the unused loading capacity and at least ten percent of the total loading capacity (TLC) remains unused after the increase, then the increase is considered a de minimis lowering of water quality. Thus, the activity and modified or new permit limit is not subject to the antidegradation demonstration requirements. The current rule establishes a clear threshold based on the capacity that, cumulatively, ever could be allocated to effluent mass increases as ten percent of TLC has to remain unused. That is, as multiple requests or multiple dischargers request small increases to discharge limits, the cumulative cap is:

90% TLC – Background Level = Cumulative Effluent Cap

As the TLC is based upon water quality criterion and the applicable stream design flow, the mass to remain unused is constant unless effluent load or background load changes dramatically. In contrast to the current rule, the draft rule defines the de minimis/cumulative cap based on only unused loading capacity. As in the current rule, for high quality waters the de minimis increase to a limit (or to a new limit) has to be less than or equal to ten percent of the existing unused loading capacity, determined at the time of the specific proposed new or increased loading of the pollutant of concern. The cumulative cap provision in the draft rule is different than the one in the current rule. The current rule provides that at least 10 percent of the <u>total</u> loading capacity must remain unused; the draft rule states that at least 75 percent of the <u>unused</u> loading capacity must remain unused. (See draft rule at 327 IAC 2-1.3-4(b)(1)(A)(i)(DD)) OSRWs have similar issues, but a more stringent cumulative cap of 97.5 percent. (See Proposed Rule at 327 IAC 2-1.3-4(b)(1)(B)(i)(DD)) (BT, AWO)

Response: The revised draft rule establishes a benchmark available loading capacity equal to 90% of the available loading capacity at the time of the first request to lower water quality in a high quality water, including Lake Michigan. The rule proposes that this benchmark loading capacity be established which will limit the number of discharges that can be permitted without an antidegradation demonstration.

Comment: IDEM indicated that it intended to substantially reduce the cumulative cap for high quality waters, based on the opinion in *Ohio Valley Environmental Coalition v. Horinko*, 279 F. Supp. 2d 732 (S.D. W.Va. Huntington Division 2003). That case concerned U.S. EPA's approval of West Virginia's antidegradation rules. As it concerns de minimis/cumulative cap, the court determined that the administrative record supported U.S. EPA's approval of West Virginia's de minimis provision; however, the administrative record did not support U.S. EPA's approval of West Virginia's cumulative cap. It should be noted that *Horinko* only is binding upon U.S. EPA as it concerns its review and approval of West Virginia's antidegradation rules. Furthermore, the court did not prohibit U.S. EPA from approving state rules that allow a de minimis lowering without an antidegradation demonstration. Rather, the court simply determined that U.S. EPA did not adequately justify its decision to approve West Virginia's approach concerning the cumulative cap. The additional observations the court made concerning the size of the cumulative cap were dicta – remarks that are irrelevant to the court's actual holding in the case. Thus, it is inappropriate to take those remarks out of context, especially to the extent of using them as the basis for making a significant change to the de minimis/cumulative cap provisions that currently apply to high quality waters. In addition, the courts also have recognized that U.S. EPA has afforded the states and tribes some discretion in determining what constitutes a significant lowering of water quality. U.S. EPA has accepted a range of approaches to defining a "significance threshold" over which a full antidegradation review is required. This issue was considered at length in the process of developing the Water Quality Guidance for the Great Lakes. Relying on input offered during a four-year open public process involving environmental groups, industry representatives, and other experts, with numerous opportunities for public input, the directors of the eight Great Lakes states and U.S. EPA technical experts reached a consensus on a significance threshold value of ten percent (10%) of the available assimilative capacity, coupled with a cumulative cap. A ten percent (10%) value is within the range of values for significance thresholds that U.S. EPA has approved in other states. (See *Kentucky Waterways Alliance v. Johnson*, No. 06-5614 (6th Cir. 2008) (holding that the 10 percent de minimis value in Kentucky's antidegradation regulations was acceptable)). IDEM has not presented data or information to show that the current de minimis/cumulative cap provisions are not satisfactory for managing antidegradation standard requirements with respect to minor increases to permit limits. In fact, the application of the cumulative cap and the definition of that cap in the current rule is appropriate and justifiable. The de minimis allowance of ten percent of unused loading capacity should be established as the default allowance, and the Proposed Rule should clarify that simple loading capacity calculations will be sufficient to demonstrate that a discharger qualifies under the de minimis provisions. (BT, AWO)

Response: The draft rule has been revised to reflect a de minimis threshold that is of 10% or less (preserving 90%) of the existing available loading capacity determined at the time of the specific proposed new or increased loading of the regulated pollutant for all high quality waters, including OSRWs. The revised draft rule also establishes a benchmark available loading capacity equal to 90% of the available loading capacity at the time of the first request to lower water quality in a high quality water. The rule proposes that this benchmark loading capacity be established which will limit the number of discharges that can be permitted without an

antidegradation demonstration.

Comment: The draft rule also should provide for the ability to establish an alternative de minimis threshold (similar to the Indiana rule providing a default mixing zone, but also allowing dischargers to seek alternate mixing zones). An alternative de minimis threshold would be appropriate under several circumstances in which it can be shown that a different value or method of determination would still result in a de minimis lowering. The following analyses and studies are examples of techniques to develop an alternative de minimis threshold in lieu of the default ten percent de minimis value:

1. Correlation of the proposed increased effluent load to instream concentration response relative to water quality criteria. This involves determining how a de minimis increase would impact receiving stream water quality as measured by a relative change to the water quality criteria. The correlation would show how a small change in water quality criteria (originally designed to protect 95 percent of aquatic life) would still conservatively protect the indigenous organisms.
2. Incorporation of the non-conservative fate of a constituent of concern. For example, the nitrogen series decay can be integrated into a de minimis assessment for ammonia. A de minimis loading of greater than 10 percent may be kinetically reduced to less than 10 percent within the antidegradation segment of the receiving water.
3. Use of alternative receiving water design flows for effluent dominated waters. If the de minimis loading is discharged to a zero flow receiving water (for example, 7Q10 = 0), then an alternative flow must be generated to determine the initial total loading capacity and subsequent remaining unused loading capacity. This alternative flow may be of the form of an upper level statistic (99th percentile, etc.) of the effluent flow itself or other representative flow during average receiving water flow conditions (either continuous or intermittent). Wet weather conditions and corresponding receiving water flow may also be analyzed.
4. Use of an alternative statistic for background concentration. Based on instream monitoring data, a background concentration statistic other than average/mean/median may be more appropriate considering the frequency of detection and the magnitude of detection relative to water quality criteria.

(BT, AWO)

Response: The draft rule has been revised to reflect a de minimis threshold that is of 10% or less (preserving 90%) of the existing available loading capacity determined at the time of the specific proposed new or increased loading of the regulated pollutant for all high quality waters, including OSRWs. IDEM believes the proposed de minimis threshold provides a simple and consistent approach to determining when a significant lowering of water quality will occur.

Comment: The draft rule should provide a cumulative cap of ten percent of the total loading capacity, consistent with the current rule. The following information can be used to demonstrate that this cumulative cap is consistent with a de minimis allowance. Several conservative assumptions already are applied to the determination of the cumulative de minimis cap of ten percent of the total loading capacity that must remain unused. These assumptions include:

1. Use of chronic water quality criteria to calculate the total loading capacity.
2. Use of low flow (i.e., 7Q10) for receiving water when calculating total loading capacity.
3. Use of a maximum permit limit for current effluent loading, if available.
4. Use of a maximum monthly average flow to calculate current effluent load, if the discharge does not have a permit limit.

5. Conservative nature of effluent for all constituents.

These assumptions are cumulative, that is, they are applied simultaneously. Therefore, the probability of impact due to a de minimis increase is reduced geometrically (multiplication) as the assumptions "overlap." For example, the cumulative cap of ten percent total loading capacity remaining unused can be interpreted as allowing cumulative de minimis effluent loading increases up to 90 percent of the total loading minus the background load. Under assumption #2 above, if the ratio of the median receiving water flow to the corresponding 7Q10 flow is 7:1 (typical for variety of Indiana receiving waters as indicated from USGS gauging station data), the de minimis loading increase on an average basis approximates as 90% / 7 = 13%. Applying assumption #4 simultaneously, if the ratio of the average effluent flow to maximum monthly average flow is 2:1 (arbitrary), then the de minimis loading increase on an average basis would further reduce to 13% / 2 = 7%. Additional assumptions above would further reduce the de minimis loading based on average, typical conditions. This example illustrates the general nature (not particular calculation techniques) of cumulative conservative assumptions for the current de minimis loading cap, further supporting the retention of the cap in the proposed antidegradation rules. (BT, AWO)

Response: The revised draft rule also establishes a benchmark available loading capacity equal to 90% (which translates to a cumulative cap of ten percent) of the available loading capacity at the time of the first request to lower water quality in a high quality water.

Comment: The de minimis/cumulative cap provisions for OSRWs are far more stringent than the corresponding provisions for high quality waters. Such more stringent provisions do not comply with the requirements of SEA 431, which provide that OSRWs are subject to the same antidegradation requirements as high quality waters, plus an additional overall improvement requirement. IC 13-18-3-2(l) provides in relevant part:

> For a waterbody designated as an outstanding state resource water, the board shall provide by rule procedures that will …
>
> > (2) allow for increases and additions in pollutant loadings from an existing or new discharge if:
> >
> > > (A) there will be an overall improvement in water quality for the outstanding state resource water as described in this section; and
> > > (B) the applicable requirements of 327 IAC 2-1-2(1) and 327 IAC 2-1-2(2) and 327 IAC 2-1.5-4(a) and 327 2-1.5-4(b) are met.

The 327 IAC sections referenced in this provision are the antidegradation requirements for all waters (Tier 1) and high quality waters (Tier 2). Application of this provision clearly requires that the OSRW antidegradation requirements, including specification of de minimis/cumulative cap provisions, should be the same as those for high quality waters. Therefore, the draft rule should be revised so that the de minimis/cumulative cap provisions recommended in previous industrial entities comments on high quality waters also apply to OSRWs. (BT, AWO)

Response: The draft rule has been revised to reflect a de minimis threshold that is of 10% or less (preserving 90%) of the existing available loading capacity determined at the time of the specific proposed new or increased loading of the regulated pollutant for all high quality waters, including OSRWs. The revised draft rule also establishes a benchmark available loading capacity equal to 90% of the available loading capacity at the time of the first request to lower water quality in a high quality water, including an OSRW.

Comment: There is no technical or scientific basis for the requirement that the proposed net increase in the loading of a pollutant of concern is less than or equal to one percent of the existing unused loading capacity determined at the time of the specific proposed new or

increased loading of the pollutant of concern. Similarly, there is no technical or scientific basis for the benchmark unused loading capacity figure of 97.5 percent -- the amount of unused loading capacity that must remain after new/increased discharges are allowed. (See draft rule 327 IAC 2-1.3-4(b)(1)(B)(i)(CC)) Based on the conservative nature of the assumptions underlying current antidegradation requirements, a ten percent de minimis level and ensuring that ten percent of loading capacity remains after all increases are considered should be sufficient to protect both high quality waters and OSRWs. EPA agreed when it adopted the Great Lakes Initiative, which applied to all high quality waters, including the Great Lakes themselves. In addition, the only rationale provided by IDEM appears to be an analogy to Clean Air Act (CAA) increments for Prevention of Significant Deterioration (PSD). However, there is no relationship between different PSD areas and waterbodies designated as high quality or OSRW and no indication that what may be a sound scientific basis for CAA emission rules can be transferred without further analysis to wastewater discharges. IDEM should continue applying the de minimis and cumulative cap levels that EPA approved for all high quality waters, including OSRWs. (BT, AWO)

Response: The draft rule has been revised to reflect a de minimis threshold that is of 10% or less (preserving 90%) of the existing available loading capacity determined at the time of the specific proposed new or increased loading of the regulated pollutant for all high quality waters, including OSRWs. The revised draft rule also establishes a benchmark available loading capacity equal to 90% of the available loading capacity at the time of the first request to lower water quality in a high quality water, including an OSRW.

Exemption justification

Comment: The antidegradation draft rule should provide some criteria for justifying exemptions. In the response to comments, IDEM states that the draft rule has a finite list of exemptions and the discharger is required to justify claiming an exemption. (IWQC-IMA)

Response: The concept of the exemption justification has been removed from the revised draft of the rule. The revised draft requires some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality. In the revised draft, activities that need no further justification are listed in 327 IAC 2-1.3-4. These activities do not require further justification because (a) they are short-term, temporary; (b) they are thought to cause only a de minimis increase in pollutant loading, or (c) have already submitted the necessary information as part of an existing applicable permit.

Comment: It is appropriate, as the draft rule requires at 327 IAC 2-1.3-5(a)(2), that "the exemption justification shall be submitted concurrently with the application for a new, renewed, or modified NPDES permit." Further clarification is needed about the manner that exemptions that do not require a permit application will be managed. (IWQC-IMA)

Response: The concept of the exemption justification has been removed from the revised draft of the rule. The revised draft requires some level of an antidegradation demonstration for all of the activities that result in a significant lowering of water quality.

WET and pH

Comment: The draft rule at 327 IAC 2-1.3-4 sets forth procedures for determining whether a new or increased loading of a pollutant of concern is exempt from the antidegradation demonstration requirements. However, the draft rule contains no appropriate provisions

regarding whole effluent toxicity (WET) and pH. WET and pH are non-conservative parameters, for which it is simply not feasible to construct procedures for anti-degradation review (for example, mass loading cannot be calculated for WET and pH). Therefore, the water quality criteria are the only valid reference point to use in assessing water impacts with respect to these parameters. The draft rule should clearly provide that WET and pH shall not be subject to antidegradation review. (BT, AWO)

Response: In the revised draft rule, "pollutant of concern" has been replaced with "regulated pollutant" and the proposed definition of regulated pollutant is: "Regulated pollutant" means any:

(A) parameter:

(i) for which water quality criteria have been adopted in or developed pursuant to 327 IAC 2-1 and 327 IAC 2-1.5;

(ii) including narrative and numeric criteria;

(iii) including nutrients, specifically phosphorus and nitrogen; and

(iii) excluding biological criteria, pH, and dissolved oxygen; and

(B) other parameter that may be limited in an NPDES permit as a result of, but not limited to:

(i) best professional judgment;

(ii) new source performance standards;

(iii) best conventional pollutant control technology;

(iv) best available technology economically achievable; or

(v) best practicable control technology currently available;

for the appropriate categorical guidelines of 40 C.F.R. 400 to 40 C.F.R. 471."

Whole effluent toxicity is a regulated pollutant. 327 IAC 2-1.5-8(b)(1)(E) (ii) says, in part, that "A discharge shall not cause acute toxicity, as measured by whole effluent toxicity tests, at any point in the waterbody. Compliance with this criterion shall be demonstrated if a discharge does not exceed one and zero tenths (1.0) TUa in the undiluted discharge. For a discharge into a receiving stream or Lake Michigan, for which an alternate mixing zone demonstration is conducted and approved in accordance with 327 IAC 5-2-11.4(b)(4), compliance with this criterion shall be demonstrated if three-tenths (0.3) TUa is not exceeded outside the applicable alternate mixing zone. However, it is unlikely that WET would be the sole trigger for an antidegradation review.

Total residual chlorine

Comment: Total residual chlorine (TRC) should not be subject to antidegradation review, but the draft rule does not contain any appropriate provision regarding TRC. IDEM imposes effluent limitations for dischargers that use chlorine for disinfection or zebra mussel control. The concentration of water quality based effluent limits (WQBELs) are below the level of quantification and often below the level of detection. Therefore, it is not possible to determine mass loading for TRC in a discharge. Moreover, TRC dissipates quickly, and the background concentration in the receiving water will always be zero. Thus, there is no loading capacity, either unused or total. As a result, it is not possible or necessary to construct antidegradation review procedures for TRC. The draft rule should provide that TRC shall not be subject to antidegradation review. (BT, AWO)

Response: The use of chlorine for disinfection has known risks to aquatic life; therefore, effluent discharges that contain total residual chlorine are subject to antidegradation

review. According to the CHEMICAL SUMMARY FOR CHLORINE prepared by the Office Of Pollution Prevention and Toxics, U.S. Environmental Protection Agency, August 1994 (EPA 749-F-94-010a): "Chlorine has high acute toxicity to aquatic organisms; many toxicity values are less than or equal to 1 mg/L. Twenty-four-hour LC50 values range from 0.076 to 0.16 mg/L for Daphnia magna (water flea) and from 0.005 to 0.1 mg/L for Daphnia pulex (cladocern) (AQUIRE 1994); 48-hour LC50 values range from 5.3 to 12.8 mg/L for Nitocra spinipes (snail); and 96-hour LC50 values range from 0.13 to 0.29 mg/L for Oncorhynchus mykiss (rainbow trout), from 0.1 to 0.18 mg/L for Salvelinus fontinalis (brook trout), and from 0.71-0.82 mg/L for Lepomis cyanellus (green sunfish) (AQUIRE 1994). Papillomas of the oral cavity in fish have been associated with exposure to chlorinated water supplies (NTP 1992). Low level chlorination (0.05 to 0.15 mg/L) results in significant shifts in the species composition of marine phytoplankton communities (HSDB 1994)." To view the entire document, go to: http://www.epa.gov/chemfact/s_chlori.txt

Total loading capacity when there is no numeric water quality standard

Comment: The draft rule does not address how to determine total loading capacity in cases where there is: (1) a narrative water quality standard but no corresponding numeric water quality criteria; and (2) an existing or proposed limit derived from either technology-based effluent limits (i.e., BAT, BPT, etc.) or Best Professional Judgment (i.e., historical performance, etc.). Many conventional pollutants such as BOD, COD, and TSS apply these two scenarios in permits, and the methods described in 327 IAC 2-1.3-4(b)(1)(A)(i)(BB) and (CC) to generate water quality criteria are not appropriate for these surrogate parameters where toxicity response information cannot be created. This is a similar problem for high quality waters that are also OSRWs, as described in 327 IAC 2-1.3-4(b)(1)(B)(i)(BB) and (CC). IDEM should clarify the draft rule to provide specific requirements for these types of situations or, more appropriately, state that the permittee would be exempt from antidegradation review and would not have to make an antidegradation demonstration for those parameters that do not have corresponding numeric water quality criteria at the time of the request for increase. Alternatively, IDEM could include a procedure that a permittee could follow to make a showing that there will be no significant impact (i.e., de minimis lowering of water quality) to a receiving water where there is no numeric standard. (BT, AWO)

***Response*:** It is not possible to determine the loading capacity of the receiving waterbody for a pollutant that does not have a numerical water quality criterion. Therefore, it is not possible to determine if the discharge of a pollutant that does not have a numerical water quality criterion will cause a significant lowering of water quality using a numerical approach based on loading capacity. However, if the pollutant, without a water quality criterion is known or believed to be present in the discharge and it has a technology-based effluent limit or if the pollutant is known to cause or contribute to a violation of the narrative water quality standards found in 327 IAC 2-1-6(a) or 327 IAC 2-1.5-8(b), then the pollutant will be required to be included in the antidegradation demonstration.

Antidegradation requirements should not be applied to Tier II values

Comment: Under the rules that apply to dischargers in the Great Lakes system, IDEM may develop a Tier II value based on as little as one test of water fleas (*daphnids*) and application

of extremely large "uncertainty factors." These values will change over time – as more data are developed, IDEM will reevaluate its database, and also apply smaller uncertainty factors to take into account the greater amount of data. Thus, different dischargers, whose permits are reviewed at different times, will likely be faced with different Tier II values for the same exact substance. In this circumstance, the antidegradation trigger level for the first discharger could be much smaller than for subsequent facilities, and the first discharger may have to go through antidegradation review while other, later dischargers will not be subject to those requirements, even though they are all discharging the same substance at the exact same level. This is an arbitrary, unfair system that bears no rational relationship to the actual environmental impact of facility activities. Therefore, we believe that the antidegradation review process should not apply to substances that have Tier II values. At a minimum, IDEM should not apply numeric trigger levels. Instead, there should be a qualitative test, such as "significant impact on water quality." That would allow IDEM to assess the likely effect of the substance, without the result depending solely on when the discharger has submitted its application and which uncertainty factor is currently appropriate for use in a Tier II value. (BT, AWO)

Response: Tier II values are the applicable water quality criterion for any substance that does not have the level of toxicological data required to develop a Tier I water quality criterion. The revised draft of the rule proposes a de minimis lowering of water quality of 10% or less of the available loading capacity, calculated using numeric water quality criterion, including Tier II values, for all high quality waters. NPDES permitted dischargers are given the opportunity to obtain additional toxicological data for a pollutant with a Tier II value.

Comment: A qualitative trigger level would be especially appropriate for use in assessing whether to apply antidegradation review to major cations and anions, such as calcium, sodium, potassium, magnesium, manganese, carbonate, bicarbonate, phosphate and sulfate. Under previous versions of the draft rules, these substances were subject to the Tier II value process. As a result, IDEM will derive very stringent Tier II values for the cations and anions, and when a discharger submits a request to increase its discharge of one of those materials, it will be very likely to trigger antidegradation review because the trigger levels for review will be very small. However, this process does not consider the fact that evaluating toxicity of these substances is a complex matter. There are substantial differences in toxicity among the major ions (some ions present very little toxicity), and there will be differing responses of aquatic organisms depending on the ionic composition of waters. When evaluating the toxicity of a major ion, one must consider the toxicity effects of the opposing ion as well as the ionic balance of the solution. Application of strict numeric trigger levels in antidegradation review does not allow for evaluation of any of those factors. Therefore, if the cations and anions are to be subject to antidegradation review, the trigger level should be qualitative, such as "significant impact on water quality," so the appropriate factors can be considered. (BT, AWO)

Response: Only those cations and anions that have the potential to cause or contribute to a violation of the narrative water quality criteria will be assessed through an antidegradation demonstration by the application best professional judgment to the water quality criteria found in 327 IAC 2-1-6(a) and 327 IAC 2-1.5-8(b).

Concentration limits are not appropriate in all situations

Comment: If IDEM imposes both a mass limit and a concentration limit, this provision should not be imposed outside the Great Lakes Basin. This provision was taken from Indiana's GLI rules. The Indiana GLI rules do not impose this rule outside the Great Lakes Basin. It is a

significant change from the current rules, and IDEM has provided no reason why the current rules are inadequate. (BT, AWO)

Response: Concentration limits are essential to ensure that a discharge meets water quality standards which are measured by the concentration of a pollutant in the receiving waterbody. Concentration measurements are also essential to determine if a lowering of water quality will occur downstream of the permitted discharge, because degradation occurs when the concentration of a pollutant is increased at the edge of the mixing zone. Therefore, IDEM believes it is appropriate to require evaluation of concentration as well as mass to ensure antidegradation of water quality.

Comment: If, despite the above comment, IDEM retains the mass/concentration requirement, then it at least needs to provide exemptions for situations in which application of this requirement would be either environmentally counterproductive or unnecessary. For instance, concentration limits can act as a disincentive to water conservation practices. Water conservation methods will often increase the concentration of a pollutant in a discharge, even when the total mass of the pollutant is decreased. Therefore, the requirement for a mass limit should not be applied in cases where it would discourage or prevent water conservation practices. (BT, AWO)

Response: IDEM agrees that a reduction in the discharge flow without a corresponding reduction in the mass loading of a pollutant will result in an increase in the concentration of that pollutant in the discharge, and, at the same time, the reduction in the discharge flow will result in a reduction in the total and available loading capacity of the receiving waterbody. Therefore, a reduction in the discharge flow could easily result in a significant lowering of water quality downstream of the permitted discharge, and an antidegradation demonstration would be required. The demonstration will allow the applicant to show the benefits, for example, water conservation gained of the proposed discharge.

Comment: There are other situations in which application of both mass and concentration limits would clearly be unnecessary to protect water quality. For example, if the amount of the facility's effluent flow is very small in relation to the stream flow, then compliance with a mass limit should ensure that the waterbody would not be impaired on a concentration basis. Therefore, IDEM should not be required to apply a concentration limit in that case. (BT, AWO)

Response: Even with a small discharge to a large waterbody, IDEM must ensure that the discharge meets the WQBELs based on the acute toxicity of the pollutant. The only way to ensure that the discharge meets the WQBEL based on the acute toxicity of the pollutant is to measure the concentration of the pollutant in the discharge.

Activities covered by general permits should not be subject to antidegradation review

Comment: The draft rule contains no references to general permits. Earlier statements by IDEM regarding general permits indicated that IDEM intends to keep working with U. S. EPA to provide justification to demonstrate that existing requirements are satisfactory to address antidegradation. IDEM refers to *Ohio Valley Environmental Coalition v. Horinko*. 279 F. Supp. 2d 732 (S.D. W. Va., Huntington Division 2003). That case concerned U.S. EPA's approval of West Virginia's antidegradation rules. The court determined that U.S. EPA did not provide sufficient support for its approval of West Virginia's decision to conduct antidegradation review at the time a state general permit is issued, rather than to require case-by-case review of each activity seeking coverage under a general permit. *Id*. at 762. This decision only is binding upon U.S. EPA as it concerns its review and approval of West Virginia's antidegradation rules.

However, the general principles of law discussed in that case provide useful guidance concerning Indiana's antidegradation rulemaking. As IDEM rightfully has recognized, the court did not prohibit U.S. EPA from approving state rules that do not require individual antidegradation review for each project seeking coverage under a general permit. Rather, the court simply determined that U.S. EPA did not adequately justify its decision to approve West Virginia's approach. Furthermore, the court held that U.S. EPA could allow states to adopt rules to provide that antidegradation review would occur when a general permit is issued, rather than when dischargers submit notices of intent to comply with the general permit. Thus, the case suggests that IDEM should make specific findings to support rules that do not require case-by-case antidegradation review of activities covered by general permits. Such specific findings will allow U.S. EPA to approve the rules based on an adequate administrative record. (AWO)

Response: IDEM has begun the process of converting Indiana's general permits from a permit-by-rule format to entirely administratively issued general permits. Antidegradation requirements will be considered throughout the process, and it is IDEM's intent to conduct the appropriate level of antidegradation review on each administratively issued general permit. If the administratively issued general permit satisfies the antidegradation requirements, then any NOI that satisfies the general permit requirements will be also satisfy the antidegradation requirements. Administratively issued general permits will be renewed/re-issued every five years. Antidegradation reviews will be conducted when the administratively issued permits are renewed/re-issued.

Comment: In prior responses to comment, IDEM has recognized that it properly could support not requiring individual antidegradation review for activities seeking coverage under most general permits. There may be a general concern that it is not possible to make an upfront determination that a general permit meets antidegradation requirements because activities to be covered by the general permit will occur throughout the state. However, the very nature of the activity for which the waiver of antidegradation review is applicable will demonstrate that there should not be an adverse water quality impact regardless of where the activity is conducted. The requirements to establish a general permit for discharges from a particular type of activity are sufficient to demonstrate that no significant degradation will occur from the cumulative effects of all such discharges. Therefore, a second antidegradation review for each individual discharge seeking coverage under a general permit is unnecessary. Antidegradation review only is required for a proposed new or increased discharge; therefore, the draft rule should be revised to make it clear that, in cases where existing activities currently are covered by general permits, or in cases where general permit coverage is sought in the future (either by switching from an individual permit to a general permit or because a previously unregulated activity becomes regulated), those actions are not subject to antidegradation review. The draft rule should be revised to clarify that, when IDEM renews or reissues general permits in the future, which would require existing dischargers to submit new notices of intent, there will be no need for IDEM to consider antidegradation review because there will be no new or increased discharge. (AWO, ICC)

Response: IDEM has begun the process of converting Indiana's general permits from a permit-by-rule format to entirely administratively issued general permits. Antidegradation requirements will be considered throughout the process, and it is IDEM's intent to conduct the appropriate level of antidegradation review on each administratively issued general permit. If the administratively issued general permit satisfies the antidegradation requirements, then any NOI that satisfies the general permit requirements will be also satisfy the antidegradation requirements. Administratively issued general permits will be renewed/re-issued every five years. Antidegradation reviews will be conducted when the administratively issued permits are

renewed/re-issued.

Comment: 327 IAC 2-1.3-(1)(c) should be deleted from the draft antidegradation rule. As noted in the summary/response from the first comment period, "All existing Indiana-issued general permits by rule will be evaluated for compliance with antidegradation standards as required by PL 78-2009 (House Enrolled Act 1162, 2009 General Assembly regular session.)" In essence, the rules for general permits have to undergo antidegradation review, not each general permit. (IWCQ-IMA, ICC)

Response: IDEM believes it is important to reflect in the rule the IC 13-18-3-2(p) statutory requirements regarding antidegradation for general permits. IDEM has begun the process of converting Indiana's general permits from a permit-by-rule format to entirely administratively issued general permits. Antidegradation requirements will be considered throughout the process, and it is IDEM's intent to conduct the appropriate level of antidegradation review on each administratively issued general permit. If the administratively issued general permit satisfies the antidegradation requirements, then any NOI that satisfies the general permit requirements will be also satisfy the antidegradation requirements.

Comment: IDEM has the authority to require an individual permit for an activity if IDEM determines that a general permit is not adequate to assure compliance with water quality standards, and IDEM currently has the authority to deny general permit coverage to any existing or proposed new discharger if IDEM determines that the activity will result in a discharge that cannot adequately be controlled through the general permit requirements. Several general permits specifically exclude certain types of activities for which it has been determined that coverage by a general permit is not appropriate to control the discharge. General permits only are allowed for activities with an insignificant water quality impact. Otherwise, IDEM has the authority to require dischargers to obtain an individual permit. If there is a concern that a particular activity could cause a significant lowering of water quality, it is appropriate for IDEM to require individual permits for these situations. Activities excluded from coverage by a general permit must undergo the antidegradation review process that applies to issuance of individual NPDES permits. (AWO)

Response: IDEM agrees that activities excluded from coverage by a general permit must undergo the antidegradation review process that applies to issuance of individual NPDES permits.

Comment: There are two general methods to provide that specific activities seeking coverage under general permits are not required to undergo individual antidegradation review. First, it can be determined that discharges authorized by a general permit do not cause a significant lowering of water quality. Under this alternative, the draft rule would need to be revised to provide that activities seeking general permit coverage are not required to make an antidegradation demonstration. The language for the insignificant lowering approach would be inserted into draft rule Section 5 – Exemption Justification – and provide as follows:

> Activities seeking coverage under the general permits in 327 IAC 15 are not considered to cause a significant lowering of water quality.

Alternatively, the Proposed Rule could be revised to specify that discharges authorized by general permits satisfy the antidegradation policy because they are necessary to accommodate important economic or social development in the area in which the discharge is located. The language for the upfront antidegradation demonstration approach would be placed in Proposed Rule Section 6 – Antidegradation Demonstration Application – and state the following:

> The department has determined that activities authorized by general permits under 327 IAC 15 are necessary to accommodate important economic and/or social development in

the area in which the discharge is located. A person or entity submitting a notice of intent to comply with a general permit does not need to submit an antidegradation demonstration.

Either revision would ensure that IDEM will not need to conduct individual antidegradation review for each discharger seeking coverage of a general permit. The antidegradation rule could use one approach for all general permits or could use both approaches and divide the general permits between them. Documentation supporting either approach should be included in the fact sheet for the antidegradation rulemaking. The information would become the record to support U.S. EPA's determination to approve Indiana's decision concerning antidegradation review of activities authorized by general permits. (AWO)

Response: IDEM intends, through this rulemaking and its revision of the NPDES general permit language, to ensure that activities covered by a general permit meet all applicable antidegradation requirements and an adequate administrative record is established.

Comment: Because IDEM has not "reviewed" the general permits as directed by the General Assembly, it is very difficult for a general permit holder to comment on the draft rule regarding general permits. The member companies of the Indiana Coal Council do not understand the antidegradation draft rule and how it will be implemented; therefore, it is impossible to comment and make suggested changes to the draft rule. IDEM must "review" the current general permits as soon as possible so a regulated entity can determine how its activities will be regulated and then can comment on the draft rule accordingly. Delay in these determinations further confuses the regulated community and coal mine general permit holders in particular. (ICC)

Response: IDEM has begun the process of converting Indiana's general permits from a permit-by-rule format to entirely administratively issued general permits. Antidegradation requirements will be considered throughout the process, and it is IDEM's intent to conduct the appropriate level of antidegradation review on each administratively issued general permit.

Public involvement is important

Comment: Public outreach and education is critical to permit issuance. To provide the citizens of Indiana the assurance of quality outreach and education, public venues whereby antidegradation is discussed should be managed in a consistent manner by the IDEM. (NIF)

Response: IDEM anticipates conducting public outreach and education appropriate for each permit application received.

Public notice provisions are onerous and unnecessary

Comment: 327 IAC 2-1.3-7(b)(3) requiring an applicant to hold a public meeting in the project locale before submitting the antidegradation demonstration to IDEM should be deleted from the draft antidegradation rule. IDEM's notifying the public of an antidegradation demonstration being received from an applicant is sufficient. Applicants should not have to hold a public meeting prior to submitting an application. The SID states as follows:

> Opportunity for public comment is an essential element of the antidegradation decision making process and is required under Federal regulations at 40 CFR 131.12. If the tentative decision relates to an activity subject to a NPDES permit, the public participation requirements may be fulfilled by the public notice of the draft permit and fact sheet. In any event, the public notice of the tentative decision must either set forth the

extent to which water quality will be significantly lowered and the basis for the tentative decision to allow the lowering, or, if analysis of the demonstration has been deferred, a tentative decision to deny the request to lower water quality pending public comment and analysis of the information obtained through antidegradation demonstration. (SID, p. 225.)

While public participation is required under 40 CFR 131.12(a)(2), there is no mandate from federal law imposing public meetings. (See 40 CFR 25, Public Participation In Programs Under The Resource Conservation and Recovery Act, The Safe Drinking Water Act, And The CWA.) IDEM can fulfill its public consultation obligation by meeting with advisory groups, as it has thus far. (40 CFR 25.4.) Additionally, public meetings are not similarly required for the issuance of an NPDES permit. (IWQC-IMA, ISEG)

Response: IDEM believes it is worthwhile for the applicant to hold a public meeting that allows interested parties the opportunity to hear the applicant's rationale supporting the elements of the applicant's antidegradation demonstration. The revised draft rule allows for the applicant to hold a public meeting or, if the applicant chooses not to hold a public meeting, the department will hold a public meeting to present the elements of the applicant's submitted antidegradation demonstration. When the department holds the public meeting, the applicant will not be afforded the opportunity to present its rationale supporting the elements of its submitted antidegradation demonstration during that public meeting.

Comment: If IDEM is going to require a public meeting process, it should at least have requirements similar to those already existing for other programs. The draft antidegradation rule does not even require that the 25 persons be adults or sign their request for a public meeting. (As a comparison, the public hearing requirements for a solid waste disposal facility requires the filing of a petition signed by one hundred (100) adult individuals who reside in the county affected or own real property within one mile of the site of the proposed or existing facility. *See* IC 13-15-3-3(b).) Additionally, the draft antidegradation rule requires a regulated entity to hold a public meeting before submitting its application to IDEM, which is nonsensical and not required by any other state that has adopted an antidegradation rule. In fact, public hearings have traditionally been held only after an application for a permit has been issued and received preliminary approval by IDEM. Holding a hearing before even submitting an application makes no sense and will only add to the administrative burden and expense and lead to possible confusion to the public. Accordingly, the public meeting provisions do not meet the rulemaking requirements under IC 4-22-2-19.5(a) of minimizing expenses to regulated entities required to comply with the rules, achieving the regulatory goal in the least restrictive manner, and avoiding duplication of existing standards in other state and federal laws. (IWQC-IMA)

Response: IDEM believes it is worthwhile for the applicant to hold a public meeting that allows interested parties the opportunity to hear the applicant's rationale supporting the elements of the applicant's antidegradation demonstration. The revised draft rule allows for the applicant to hold a public meeting or, if the applicant chooses not to hold a public meeting, the department will hold a public meeting to present the elements of the applicant's submitted antidegradation demonstration. When the department holds the public meeting, the applicant will not be afforded the opportunity to present its rationale supporting the elements of its submitted antidegradation demonstration during that public meeting.

Commissioner's determination on antidegradation demonstration application

Comment: Cost-effective measures under consideration at 327 IAC 2-1.3-7(c)(1) must

ensure that decisions on the pollution prevention alternatives and technology assessment by the commissioner be based on options that are identified that are comparable in cost to baseline treatment costs. The objective of pollution prevention and alternative or enhanced treatment analyses are to ensure that the actual degradation of the high quality water is reduced to the greatest extent practicable; however, to be consistent with the SID, IDEM should not just consider cost-effective measures but should also consider treatment options that are identified that are comparable in cost to "baseline treatment costs." It is extremely important for IDEM do this for general permits. IDEM needs to consider and summarize how industry sectors have been through technology evaluations to reduce the further assumptions regarding decisions about applicable technologies. This is very important for operations such as coal mines, which have been through many of these evaluations and are socially and economically important to local communities and the national infrastructure. If IDEM does not properly do this industry sector, IDEM could trigger antidegradation demonstrations for individual drainage basins under each permit. Typically mining permits have 10 - 20 basins over the life of the mine. The estimated cost to assess the engineering designs and treatment performance alternatives around an individual basin has been estimated to be $50,000. This could add costs of $500,000 to $1,000,000 per mine if individual basins and "baseline treatment costs" are not rationally managed and exempted from demonstrations. As an example of the general permit rationale, an evaluation of 327 IAC 15-10 should find that general permits for "Ground Water Petroleum Remediation Systems" because IDEM oversaw the applicable technology basis for the limitations in the rule. The general permit for these types of discharges imposes monitoring requirements and numeric effluent limitations designed to protect water quality. In addition, these discharges only occur during the period of time necessary to complete the remediation process, and these projects ensure that public health and the environment is not threatened, and clean up ground water for future safe use. For example, this permit requires benzene of 5 ug/L. This limit is based on technology for meeting an at the tap drinking water standard and is almost 20 times lower than the secondary continuous concentration of 98 ug/L calculated by IDEM that protects aquatic life for chronic effects. (IWQC-IMA)

Response: The commissioner's determination will be based on the information presented in the antidegradation demonstration submitted by the applicant proposing to discharge. It is incumbent on the applicant to identify alternatives and costs and benefits that adequately represent the merits of the project that requires a significant lowering of water quality.

Comment: Cost-effective measures under consideration at 327 IAC 2-1.3-7(c)(1) must ensure that decisions on the pollution prevention alternatives and technology assessment by the commissioner be based on options that are identified that are comparable in cost to baseline treatment costs. For example, an evaluation of a treatment alternative requirement for limits for coal mining discharges to be met from the time the discharge caused by a precipitation event begins and will continuing from 48 hours to 72 hours after a precipitation event has ceased will significantly increase capital and operating costs at coal mining facilities. In this situation, 51 or more coal mining NPDES permits could be affected by this decision. Current federally required BAT technology, the "baseline treatment cost," for coal mining discharges allows operations to meet limits from the time the discharge caused by a precipitation event begins and will continue to apply until 48 hours after the precipitation event. In order meet the higher level of control, all of the discharges in these permits (approximately 400) would have to upgrade to a level of treatment that U.S. EPA found to be not economically achievable on a national basis. Based on the "Development Document for Effluent Limitations and Standards for the Coal Mining Point Source Category" (EPA, EPA 440/1-82/057, October 1982), all of these discharges would have

to upgrade their technology to incorporate neutralization, aeration, and settling to include flocculent addition technology. U.S. EPA indicated in the development document that the installation of flocculent technology for each discharge would cost between $30,000 and $40,000 per discharge in capital costs. Additional operating costs were estimated to be from $0.42/1000 gallons to $0.41/1000 gallons. Given these assumptions, this new level of treatment requirement would require a total of capital costs ranging from $12,000,000 to $16,000,000 and would require hundreds of thousands more dollars in annual operating costs. IDEM should further consider and summarize how many other industry sectors have been through technology evaluations to reduce the further assumptions regarding decisions about technology. (IWQC-IMA)

Response: The commissioner's determination will be based on the information presented in the antidegradation demonstration submitted by the applicant proposing to discharge. It is incumbent on the applicant to identify alternatives and costs and benefits that adequately represent the merits of the project that requires a significant lowering of water quality.

Water quality improvement project

Comment: At 327 IAC 2-1.3-8 concerning the water quality improvement project or payment of a fee to the OSRW improvement fund, language should be inserted into the draft rule that reflects that the fee determination should be based on the percentage of the unused loading capacity that the proposed project consumes. (ISEG)

Response: The purpose of the project or fee is to offset the impact of the significant lowering of water quality. When an applicant chooses to pay a fee in lieu of a water quality improvement project, the fee will be based on the agency's determination of the cost of a project sufficient to offset the impact of the significant lowering of water quality. The fee is statutorily limited to $500,000.

Comment: The draft rule language concerning water quality improvement projects needs clarification. The maximum dollar figure provided in the draft rule serves as a component of the guidance, but it is necessary to provide further clarification to assist permittees as to how IDEM will make a determination regarding the final cost of the required project. (NIF)

Response: The purpose of the project or fee is to offset the impact of the significant lowering of water quality. When an applicant chooses to pay a fee in lieu of a water quality improvement project, the fee will be based on the agency's determination of the cost of a project sufficient to offset the impact of the significant lowering of water quality. The fee is statutorily limited to $500,000.

Comment: It is appropriate that the draft rule expands the social or economic justification to include the positive benefits to the area of the discharge, and, for discharges that trigger an antidegradation review, the use of innovative projects that will result in an overall improvement of water quality in the watershed of the discharge is also appropriate. (ISEG)

Response: IDEM agrees that both the costs and benefits of a proposed discharge to significantly lower water quality should be evaluated and likewise the costs and benefits of innovative projects that will result in an overall improvement of water quality should be evaluated.

Failure to appropriately consider the fiscal impact of the draft rule

Comment: According to potential fiscal impact discussion included by IDEM in the

second notice document posted December 16, 2009, in the Indiana Register, the IWQC and IMA have estimated the requirement to hold public meetings will annually cost dischargers between $77,224 and $165,480. For the past five calendar years, 2009 inclusive, IDEM has received, on average, 49 new NPDES applications each year with actual numbers ranging from a low of 38 to a high of 60. IDEM has received, on average, 56 modification requests annually. This most likely means that the annual estimate of public meetings to be held by existing discharge permit holders seeking modifications or new applicants could range from a low of 49 (assuming all new permits alone required a public meeting) to a high of 105 (assuming all new permits and permit modifications required a public meeting. Below is a table containing the annual cost estimates for a permitee to development limits and hold a public meeting. This table does not include any additional costs for unused loading capacity calculation costs. Added annual costs to process a technology-based and water quality-based limit for a single pollutant will increase the annual program costs from $176,253 to $377,685. The table below most likely significantly under-estimates costs as many activities de minimis activities are not included in these calculations.

Activity	Frequency	Cost Estimates (1990 dollars)			Estimated average annual costs for 49 permits	Estimated high average annual costs for 105 permits
		Low	Average	High		
Develop a technology mass-based permit limit at a previously unpermitted facility assuming technology has been preselected[1/]	1 time	$327	$917	$1,497	$44,933	$96,285

[1/] Administrative Cost Components and Frequency per Facility, Actual cost values provided by U.S. EPA Office of Water, ECONOMIC ANALYSIS OF FINAL EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE PHARMACEUTICAL MANUFACTURING INDUSTRY SECTION TEN. COST AND BENEFITS OF THE FINAL PHARMACEUTICAL INDUSTRY EFFLUENT GUIDELINES AND MACT STANDARDS RULE, Table 10-2.

Provide technical guidance on a set technology based limit[2/]	1 time	$38	$187	$337	$9,163	$19,635
Develop and draft water quality based effluent limits	1 time	$327	$917	$1497	$44,933	$96,285
Conduct a public meeting	1 time	$1,123	$1,576	$1,871	$77,224	$165,480
Total					$176,253	$377,685

(IWQC-IMA)

Response: IDEM evaluated the cost information provided when preparing the fiscal impact analysis for the rulemaking.

Comment: Assuming that the current general permits (including Rule 7) will not be subject to the antidegradation rule, there would not be any fiscal impact to the coal industry. However, if coal mine discharges are subject to antidegradation, costs to the regulated coal mining community would substantially increase. One coal mine operator that typically has large surface mines discussed the draft rule with an outside consultant familiar with water discharges from surface coal mines. The consultant indicated that a full antidegradation demonstration could cost as much as $100,000. In a large surface mining area where multiple watersheds are encountered and as many as 25 different NPDES permits would be required over the life of the mine, antidegradation demonstration costs would exceed one million dollars. Additionally, one underground coal mine operator with experience in other jurisdictions indicated that costs at an underground coal mine could exceed $250,000 for an individual NPDES permit with associated antidegradation demonstrations. These projected costs seem exorbitant, but they are realistic. Costs would be more realistic if the draft rule were simplified and recognized other regulatory program review requirements for the same locations. Coal mines are regulated under IC 14-34 and the federal Surface Coal mining and Reclamation Act where hydrological impact issues are necessarily a part of the regulatory review and ultimate permitting decisions. If IDEM recognized these other regulatory requirements for coal mining operations, then general permits for coal mines should continue and there would be no real new costs encountered by coal mines. If the general permits for the regulated community of coal mines are not to continue, then the coal mining industry would want to provide IDEM with a more in depth fiscal analysis with supporting data. (ICC)

Response: IDEM has begun the process of converting Indiana's general permits from a permit-by-rule format to entirely administratively issued general permits. Antidegradation requirements will be considered throughout the process, and it is IDEM's intent to conduct the appropriate level of antidegradation review on each administratively issued general permit.

[2/] Providing technical guidance on a set technology-based limit, developing and drafting water-quality based effluent limits, and conducting a public meeting are estimated to be equivalent to issuing a technology based limit. This value is likely to be low in that water quality modeling usually takes longer. This is presumed to be a low, conservative estimate.

IDEM cannot presuppose the outcome of that future antidegradation review. IDEM evaluated the cost information provided when preparing the fiscal impact analysis for the rulemaking.

Technical Analysis of the Draft Rule

Comment: A technical analysis, conducted by ENVIRON for the IUG and IMA, was included by IUG as an incorporation of its comments on the antidegradation draft rule. That technical analysis is included in whole as part of these comments. (IUG)

Response: IDEM appreciates the inclusion of the technical analysis. It was considered in the proposed revisions to the draft rule.

Comment: IUG incorporated as part of its comments on the antidegradation draft rule the analysis of the draft rule prepared by Bill Beranek of the Indiana Environmental Institute (IEI). The IEI analysis is included in whole as part of these comments. (IUG)

Response: IDEM appreciates the inclusion of the IEI analysis. It was considered in the proposed revisions to the draft rule.